



# Sensitivity to Chemicals: What it is & How you can help

Riderwood Civility Committee  
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## Overview

- What is Chemical sensitivity?
- What is Multiple Chemical Sensitivity (MCS)?
- Why are synthetic fragrances unhealthy?
- How can you have safer indoor air in your apartment?
- What can we do to help Riderwood residents who have chemical sensitivity or MCS?

## ▶ We live in a chemical soup!

- 80,000 synthetic chemical substances developed since 1940s
- About 60 tested on people for health effects
- Few studies about health effects of mixes of chemicals
- “Our exposures are multiple, simultaneous, and constantly in flux” (Molot, et al., 2023).



# ► Pollution effects the health of seniors !

- Many seniors have health conditions that can be made worse by pollution.
- Asthma, COPD (chronic obstructive pulmonary disease), heart disease, migraines, and dementia are illnesses especially affected by pollution.
- Indoor air is much more polluted than outside air.



## Common products have chemicals that can make people ill

- Nail polish remover
- Certain fragrances
- Cleaning supplies
- Scented fabric softeners
- Tobacco smoke
- New upholstered furniture
- Carpet
- Tar/ asphalt
- Gasoline
- Diesel exhaust
- Food additives
- Some medications
- Volatile organic compounds (VOCs)

## Volatile organic compounds (VOCs) are a frequent indoor air pollutant.

- VOCs are gases emitted from thousands of solids or liquids.
- May have adverse health effects.
- Widely used as ingredients in household products such as cleaning, disinfecting, cosmetic, degreasing and hobby products. Paints, varnishes and wax all contain VOCs.
- All of these products can release organic compounds while you are using them (EPA, 2023).



## How common is sensitivity to chemicals?



In 2016, as many as 1:4 Americans reported sensitivity to chemicals

- Over 1:10 Americans (12 %) report being medically diagnosed with multiple chemical sensitivity (MCS)
- MCS has increased significantly in the past decade (Steinemann, 2018)
- MCS is an international problem also, affecting 9-16% of people on four continents (Molot, et al., 2023).

## Definition: Multiple Chemical Sensitivity (MCS)

- An acquired disorder,
- characterized by re-occurring symptoms,
- affecting multiple organs and systems,
- which arise in response to a exposure to unrelated chemicals,
- even at doses much lower than would cause a reaction in the general population (Damian et al., 2021; Italian Work Group, 2019).

## What causes Multiple Chemical Sensitivity ?

- The exact biological process of MCS is still unknown.
- Recent studies indicate that people with MCS become sensitized to chemicals either through a single acute exposure or smaller exposures over time (Molot, J., et al., 2023) .
- People with MCS do not habituate to chemicals they are sensitive to.

# Where have some become sensitized?

- Employees at the Environmental Protection Agency exposed to new carpet in 1987: 4-Phenylcyclohexene Toxicity <https://tiltresearch.org/2017/04/16/toxicity-at-epa-headquarters-early-evidence-of-tilt/>
- Veterans exposed to pesticides in the Gulf War (1990-1991) <https://pubmed.ncbi.nlm.nih.gov/8921568/>
- Nurses in Massachusetts hospital (1990s): disinfectants & sterilants
- Scientists working with formaldehyde
- First responders to 9/11 in New York City (2001)
- Residents exposed to mold in trailers after Hurricane Katrina (2005)
- Veterans of Iraq/Afghanistan wars <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8816568/>

## Some MCS symptoms (many occur in at the same time)

- nausea
- dizziness
- headache
- upper respiratory discomfort, runny eyes,
- chest and throat pain
- joint pain (arthralgia)
- weakness
- fatigue
- altered vision and/or hearing
- lack of concentration
- memory difficulties
- depression
- anxiety, mood disruption (Zucco & Doty, 2021, p.1)
- skin symptoms



## Avoidance of chemicals is the ONLY known treatment for MCS!

- Symptoms improve or disappear when the offending chemicals are avoided.
- Given that most of the chemicals are common environmental pollutants, it is practically impossible to avoid them completely (Rossi & Pitidis, 2018, p. 138).
- Modifying living, work, and other spaces by reducing levels of VOCs results in fewer symptoms.

## Why are synthetic fragrances so unhealthy?

[https://aseq-ehaq.ca/pdf/fragrance-free\\_Colour\\_EN.pdf](https://aseq-ehaq.ca/pdf/fragrance-free_Colour_EN.pdf)

- 4,000 chemicals are used in manufacturing fragrances.
- Fragrance recipes are considered trade secrets, so manufacturers are not required to disclose fragrance chemicals in the label's list of ingredients.
- 95% of the ingredients contained in fragrances are petroleum-based volatile organic compounds (VOCs) that easily evaporate and disperse into the air we breathe.
- Only a few chemicals in fragrances have been tested for toxicity, alone or in combination.



# ➤ Air fresheners pollute indoor air !



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## Avoiding fragrances and air fresheners can help EVERYONE who has:

- Allergies
- Asthma
- COPD (chronic obstructive pulmonary disease)
- Dementia
- Chemical sensitivity
- Migraines
- Multiple Chemical Sensitivity
- A Tracheostomy



## How can we have healthier indoor air quality in our apartments?

- HANDOUT: How to have healthier indoor air quality
- HANDOUT: Examples of fragrance-free products

# SPECIFIC ways we can help residents who have chemical sensitivity or MCS





# What can we do

to accommodate our Riderwood neighbors  
who are chemically sensitive?

- **X** Avoid wearing perfumes, aftershave and personal care products with fragrances, especially in the dining rooms, theater, and large gatherings.
- **X** Avoid using scented fabric softeners in our dryer.
- **X** Do not request air fresheners in bathrooms or other public areas.



DO IT!

## How we can help our neighbors with sensitivities or MCS!

- ✓ Use Fragrance-free personal care products.
- ✓ Use Fragrance-free fabric softeners.
- ✓ Accommodate others with chemical sensitivity when asked.
- ✓ Advocate for Fragrance-free policy at Riderwood
- ✓ Join or assist the ABLE Committee





# ? ? Questions

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