Creating Healthy Indoor Spaces at Home, School and Work for those with Allergies & Asthma

October 20, 2021

OUR SPEAKERS

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OUR SPEAKERS

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Sensitive Home

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Board Certified Dermatologist

Program OUTLINE

• Indoor Allergens & Air Quality
• 8 Elements of a Green & Healthy Home
• Creating clean + healthy spaces at home, school + work
We take 25,000 breaths a day!

And our children?

4-6x that of an average adult, often close to the ground where pollutants in air tend to concentrate.
90% of these breaths are taken indoors at places like home, school + work...

...where levels of air pollutants are often 2-5x, and at times even 100x, higher than outdoor levels.

Indoor Allergens

Mold Allergy

- Moldspores are microscopic organisms called fungi, found virtually everywhere, indoors and out.
- Moldspores are spread by water, insects or air, so tiny and lightweight they can float through the air like pollen.
- These spores can be inhaled and cause allergic symptoms.

Symptoms:

- Nasal and sinus congestion
- Sore Throat
- Sneezing
- Watery or burning eyes
- Dry cough
- Shortness of breath
- Irritation of the nose, throat, or skin

Mold spores are especially dangerous for people with asthma and may trigger asthma attacks—but the exact reason is not known.
# Indoor Allergens

## Pet Allergies

- Allergic reactions to cats, dogs and other furry animals are caused by proteins found in flecks of the pets’ skin, called dander, as well as in their saliva and urine.
- You are really not allergic to the fur of your pet. You are allergic to pet dander.

## Dust Mite Allergies

- Dust mites are tiny insects that live in mattresses, pillows, upholstered furniture. They look for moisture along with their favorite food, tiny bits of shed human skin.
- Allergens from dust mite droppings and dead bodies collect in bedding, furnishings and dust, then irritate airways and eyes on contact.

## Cockroach & Mice Allergies

- Cockroaches and mice are mostly nocturnal, scavenging at night for food and water — and leaving behind trails of allergens that cause symptoms on contact or when inhaled.
- Allergen levels are usually highest on kitchen cabinets and floors, while moisture-laden bathrooms are secondary areas.
- Poorly contained food and garbage in kitchens is a well-known risk factor.
What Can We Do To Reduce Indoor Allergens?

- **Mold** – Test for mold, reduce humidity, increase ventilation
- **Pets** – Vacuum, Best = Remove pet from home, Better = Remove pet from bedroom
- **Dust Mites** – Cover pillows & mattresses in plastic, air filter in home
- **Cockroaches /Mice** – Keep food stored in tight containers, call an exterminator if needed

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**Indoor Air Quality**

The air quality in public and private buildings is an important factor to your health.

Ensuring good air quality in the indoor spaces that you live, work and play can improve your health as well as your quality of life.

Many people spend the bulk of their day indoors, so it is important to have healthy indoor air quality and to improve indoor air quality.
How does indoor air quality affect our health?

- Poor indoor air quality can be related to health problems. These can range from mild respiratory issues to more extreme symptoms. Other symptoms that poor air quality can lead to include:
  - eye, nose and sinus irritation
  - headaches
  - fatigue
  - dizziness
- Poor indoor air quality influences the risk of respiratory illnesses, allergy and asthma symptoms, and viruses that can be spread through the air. It can also further irritate existing health conditions and worsen symptoms.

What is indoor air pollution?

- Indoor air pollution is when the indoor air quality is poor.
- Could be caused by:
  - High levels of toxins or chemicals
  - Poor air flow or ventilation
  - Humidity levels or
  - Indoor temperature
- The conditions inside and outside of the building affect the air.
- Construction quality, heating, ventilation and air conditioning (HVAC) systems, and spatial layout can factor into air quality and pollution.
### Common Indoor Air Pollutants

<table>
<thead>
<tr>
<th>Pollutants</th>
<th>Fumes</th>
<th>Gases</th>
<th>Deteriorating materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household cleaning products, Mold, Tobacco Smoke</td>
<td>Oil, Gas, Coal, Wood, Paint</td>
<td>Carbon monoxide, carbon dioxide, nitrogen dioxide, ammonia</td>
<td>Insulation, asbestos, chemical coatings on furniture</td>
</tr>
</tbody>
</table>

### Improving Indoor Air Quality

- Indoor air quality can be improved by using air filters in your HVAC systems.
  - Air filters help ensure HVAC systems are functioning at their best levels. The filters trap and block harmful particles from entering your indoor space.
  - If outdoor air quality is poor, recirculation modes can be used. They reduce the intake of outdoor air, preventing outdoor pollutants from entering.
  - Additionally, an air purifier or air cleaner can help clear less serious pollutants.
Improving Indoor Air Quality Naturally

- You can open doors and windows to provide natural ventilation. You can remove chemicals and hazardous pollutants.
- Additionally, you can use more natural cleaning products to improve indoor air quality.
- Clean your indoor space often by vacuuming or mopping to remove less hazardous pollutants.

8 Elements of a Green & Healthy Home

Wes Stewart
8 Elements of a GREEN & HEALTHY HOME

DRY

• Prevent water from entering your home through leaks in roofing systems
• Prevent rainwater from entering the home due to poor drainage around the outside of the home
• Check your interior plumbing for any leaking

CLEAN

• Control the source of dust and contaminants
• Create smooth and cleanable surfaces
• Reduce clutter
• Use effective wet-cleaning
8 Elements of a GREEN & HEALTHY HOME

SAFE
- Store and properly label
- Keep poisons out of the reach of children
- Secure loose rugs and keep children’s play areas free from hard or sharp surfaces
- Install smoke and carbon monoxide detectors and keep fire extinguishers on hand

WELL-VENTILATED
- Ventilate bathrooms and kitchens
- Use whole-house ventilation for supplying fresh air to reduce the concentration of contaminants in the home
8 Elements of a GREEN & HEALTHY HOME

PEST FREE

• If needed, use sticky-traps and baits in closed containers
• Seal cracks and openings throughout the home so pests can’t get in
• Store food in pest-resistant containers

CONTAMINANT FREE

• Ventilate bathrooms and kitchens
• Use whole-house ventilation for supplying fresh air to reduce the concentration of contaminants in the home
8 Elements of a GREEN & HEALTHY HOME

WELL-MAINTAINED

• Inspect, clean and repair your home routinely
• Take care of minor repairs and problems before they become large

8 Elements of a GREEN & HEALTHY HOME

ENERGY EFFICIENT

• Use reduced amounts of energy, water, and resource consumption
• Energy efficiency/weatherization includes: Install proper weatherization, such as: insulation, air-sealing, weather-stripping, and window efficiency
• Maintain efficient heating and cooling system; proper air flow and temperature distribution; efficient hot water / steam boiler system
Creating clean + healthy spaces at home, school + work

Dr. Greg van Buskirk & Dr. Hope Mitchell

SCIENTIFICALLY-PROVEN HEALTH IMPACTS FROM CLEANING PRODUCTS

1 IN 7 CASES OF ADULT ASTHMA could be attributed to common cleaning spray use

Children of women who frequently used cleaning supplies while pregnant had a higher risk of PERSISTENT WHEEZING AND REDUCED LUNG FUNCTION

5% OF CHILDHOOD CANCER and 30% OF CHILDHOOD ASTHMA are related to chemical exposure

80% OF CONTACT DERMATITIS is a result of an irritant reaction from cleaning products
COVID HAS EXACERBATED THE PROBLEM

15-30% INCREASE IN CO2 + VOCs in indoor spaces which can contribute to chronic respiratory problems

THE 3 MOST COMMON DISINFECTANTS are associated with adverse respiratory health impacts

Increased use of disinfectants CAN ALTER THE MICROBIOME by wiping out both the good and bad bacteria

25% EXPERIENCED adverse health effects attributed to unsafe cleaning

Cleaning

- Should be a routine process
- Reduces dirt, irritants, food, germs and allergens by removing them from surfaces
- Works by using soap or detergent + water to physically remove germs.
- Lowers the risk of spreading infection.
- Clean before sanitizing and disinfecting
Sanitizing

- Important for health and hygiene, particularly on communal surfaces
- Reduces but doesn’t kill bacteria + viruses to meet public health standards
- Works on hard non-porous surfaces
- Particularly important in food preparation areas
- Does not necessarily clean dirty surfaces or remove germs
- Requires a clean surface to be effective

Disinfecting

- Stronger than sanitizers.
- Uses chemicals to kill 99.999% of viruses, bacteria, or other microorganisms only on hard, non-porous surfaces.
- Does not necessarily clean dirty surfaces or remove germs
- Requires a clean surface to be effective
- Usually needs to be left on the surface for a certain period of time to kill the germs
- Is temporary. Germs can grow again.
- Product requires EPA approval
### Even “green” cleaners” have harsh chemicals

<table>
<thead>
<tr>
<th>100% Biobased</th>
<th>Harsh Chemicals</th>
<th>EWG Brand Rating</th>
<th>Negative People Health Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, cleaning sprays</td>
<td>None</td>
<td></td>
<td>- High Concern: acute aquatic toxicity; Some Concern: skin irritation/allergies/damage</td>
</tr>
<tr>
<td>90%+ dish &amp; laundry</td>
<td></td>
<td></td>
<td>- Moderate Concern: acute aquatic toxicity; Some Concern: skin irritation/allergies/damage, developmental/endocrine/reproductive effects, biodegradation</td>
</tr>
<tr>
<td></td>
<td>Methylisothiazolinone</td>
<td></td>
<td>- Contains 1,4-dioxane, known human carcinogen</td>
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<tr>
<td></td>
<td>Benzisothiazolinone</td>
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</tr>
<tr>
<td></td>
<td>Sodium laureth sulfate</td>
<td></td>
<td>- Contains 1,4-dioxane, known human carcinogen</td>
</tr>
<tr>
<td></td>
<td>Not submitted for rating</td>
<td></td>
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<td></td>
<td>Methylchloroisothiazolinone</td>
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### Eliminating triggers in your cleaners

- Look for accreditations from organizations like: [EWG](https://www.ewg.org), [SAFER CHOICE](https://www.saferchoice.org), [100% EARTH](https://www.100percentearth.com)

- Choose fragrance free
- No signal word “Danger” or “Warning” on the label
- Dye Free
- No VOCs
- None of these common preservatives: Methylisothiazolinone (EWG rating: D) Benzisothiazolinone (EWG rating: C)
“We are a system”

- A group of individual organs that work together for the good of the person
- All parts do different activities to keep the body functioning properly
- Pay attention to your body
- Genetic vs environmental components

TIME FOR QUESTIONS
Join us for our next webinar

Food Allergy or Food Intolerance?
October 28th – 4:00 PM ET
Register at allergyasthmanetwork.org

For More Information

Visit Allergy & Asthma Network at www.allergyasthmanetwork.org

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