Reducing Allergens in the Home

Indoor Air Quality and Allergies

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ASTHMA PREVALENCE

Asthma and Allergies strike 1 out of 5 Americans

Source: Asthma and Allergy Foundation of America

$10 billion annually on Asthma meds
$6 billion annually on Allergy meds
Asthma

- Is a lung disease.
- Causes people to wheeze, cough, be short of breath, and sometimes even die.
- People with asthma can suffer from frequent periods of difficulty breathing called “asthma attacks.”
- During an attack, the airways swell, the muscles around them tighten, and the airways produce thick yellow mucous.
- 1 in 5 Americans suffer from asthma; 50% of asthma cases are “allergic-asthma.”
  - Prevalence of asthmas has been increasing since the early 1980’s across all age, sex, and racial groups.
  - Asthma does run in families. If parents have asthmas, children are more likely to have it, too.
  - Children living in urban areas and crowded or unclean conditions, are especially at risk for developing asthma.
  - African-American children living in low-income families tend to have more severe asthma; at greater risk of death.
Triggers that causes an attack?

- Cold weather
- Exercise
- Stress
- Dust mites (body parts and droppings)
- Mold (spores)
- Pet dander (skin flakes, urine and saliva)
- Roaches (body parts, secretions, droppings)
- Rodents (hair, skin flakes, urine, saliva)
- Tobacco smoke - irritant
- Air fresheners - irritant
Asthma: What can you do?

- No Cure for asthma.
- Important to prevent attacks by avoiding triggers.
About Allergies

- Allergen is something that causes allergy signs, or an allergic reaction.

- Many of the same asthma triggers also cause allergic reactions in people who don’t have asthma.
Allergy Overview

- Allergies are diseases of the immune system that cause an overreaction to substances called “allergens.”

- Allergies are grouped by the kind of trigger, time of year or where symptoms appear on the body:
  - Indoor and outdoor allergies
  - Food allergies
  - Latex allergies
  - Insect allergies
  - Skin allergies
  - Eye allergies

- People who have allergies can live healthy and active lives.

Source: Asthma and Allergy Foundation of America
Allergy and Asthma Control Begins at Home
Why?

Because we spend the majority of our time Indoors

Amount of time that most Americans spend indoors, outdoors, and in transit

Also, many people with allergies stay indoors when outdoor air is full of pollen and spores.
Prevention of Allergy and Asthma Triggers

- Three major categories of prevention:
  - Get medical advice (know your allergies/triggers) and follow the doctor’s instructions.
  - Keep a clean house.**
  - Keep people with asthma away from dust, dust mites, and smoke.**

** associated with indoor air quality
Controlling the indoor air quality can go a long way to reduce exposure to allergy triggers

- Allergens are airborne substances that cause allergic reactions and trigger nasal allergy symptoms.

- Allergen particles are carried in the air:
  - Settle onto furniture and floor surfaces.
  - They vary in size and are measured in microns.
  - The larger the particles, the faster they will settle out of the air.

- Pollen, dust mite and cockroach debris are larger and settle out of the air quicker than mold spores or animal allergens.

- 8 out of 10 people (United States) are exposed to house dust mites.

- 6 out of 10 are exposed to pet dander and pollen trapped indoors.

- Cockroaches cause allergic reactions among people who live in the inner cities and southern parts of the U.S.
Quick Steps for Managing Indoor Airborne Allergies

Involves aggressive cleaning and removal of source of allergens and reduction of humidity in home.

- Dust Mites
- Indoor Mold
- Cockroaches/Rodents
- Pets
- Smoke and Air fresheners (Irritants)
Quick steps for managing indoor air quality and allergies

**Dust Mites**

- Microscopic, eight-legged creatures.
- Are not parasitic and do not bite. They don't burrow under the skin, like scabies mites or live in skin follicles, like skin follicle mites.
- Feed on human skin scales, pollen, fungi, bacteria and animal dander.
- Dust mites do not drink free water, but **absorb water from the air** and the environment.
- To thrive, dust mites need very warm temperatures (75-80 degrees F) and high humidity levels -- 70-80 percent relative humidity. Keep indoor humidity to **around 50%**.
Dust Mites

- Most important step: Put zippered allergen impermeable or plastic covers on all pillows, mattresses and box springs.

- Wash blankets and bedspreads weekly and sheets and pillowcases more often. Be sure the water is above 130 degrees F.

- Wash stuffed toys in hot water (130 degree F.) or freeze for 48 hours.

- Change and clean cooling and heating system filters once a month.

- Have your home, care and office vacuumed and dusted frequently.

- Keep surfaces in home clean and uncluttered. Bare floors and walls are best; especially in bedroom.

- Try to wash curtains on regular basis.
Dust Mite Control

- **Mattress & Pillow Encasements** – Millions of dust mites live in your mattresses and pillows, so use dust-mite-resistant mattress encasements to keep new mites from getting into the mattress/pillows, and others from crawling up into your sleeping space.
- Also, replace mattresses every 10 years and replace pillows every 5 years.

- **Pillows** – Since some old or poorly constructed pillows can harbor dust mites, look for
  - high-quality pillows that have mite barrier properties. Also make sure pillows can stand
  - up to frequent washing so you can continue to keep dust mites at bay.
Control Indoor Mold

- Keep bathroom and kitchen surfaces clean and dry.

- Fix leaky plumbing. Seal cracks where moisture may seep in.

- Reduce humidity by running air conditioner.
Cockroach Control

• Remove all food sources and household food wastes. Food should be stored in sealed containers. Keep floors and counters clean. Make sure kitchen and sink are clean every night.
  • Cockroaches can live a month or longer on a drop of grease.

• Deny them access to food, water and shelter by repairing leaks, sealing entry points and removing clutter.
  • Keep drip pan clean and moisture free under refrigerator.

• Thoroughly and frequently clean to remove dust and cockroach byproducts.

• Consider a professional exterminator.
Pets

- Wash pet once a week.
- Do not sleep with your pet.
- Make bedroom a pet-free zone.
Smoke and Air Fresheners

- Make home, office and car smoke-free zones
- Use essential oils not synthetic fragrances – clean doesn’t have a scent
  - Can release organic gases
In the Bedroom:
1. Use certified allergen barrier bedding, Wash sheets once a week in 130°+ water
2. Replace mattresses every 10 years, pillows every 2 years
3. Vacuum floors and mattresses weekly
4. Never allow moist clothing to pile up, Keep pet sleeping areas out of the bedroom
5. Keep windows closed and use an air conditioner with replaceable filter
6. Use a certified air cleaner with HEPA filtration

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Tools/Actions

- **Run** air conditioning; change filters often – Merv 12 or 13; leave fan on auto;
- **Keep** doors and windows closed to prevent pollen from coming in;
- **Remove** shoes before entering home;
- **Washing Machine** – 130 degrees
- **Dust using** slightly moist cloths or special dry cloths to trap and lock dirt on hard surfaces.
  - Avoid a feather duster as it will simply spread dust and allergens, rather than remove them.
- **Vacuum** often
- Reducing surface dust mites.
  - Does not get to dust mites in carpets, chairs or mattresses
- **HEPA (high efficiency)** filter to capture dust.
- **Tight seems and seals.**
- **Wear** N95 mask since vacuuming can put dust in air
Air Cleaners – word of caution

- Ozone generators sold as air cleaners are not always safe and effective in removing pollutants.
- Ozone is a lung irritant that can cause adverse health effects.

Other Air Cleaning Technologies

**Filtration**
- Air filters-particles; gas-phase filters-gases

**UVGI cleaners**
- Ultraviolet radiation from UV lamps – bacterial and mold spores

**PCO**
- UV lamp along with a catalyst that reacts to light – gas pollutants from indoor air
Preventative Actions can Save $

- Emergency Medical Treatments
- Reduce number of medical appointments
- Reduce amount of medication
- Reduce amount of loss work

Reminder . . . . Save today . . . . Emergency Fund BECOME A SAVER TODAY!
The Asthma and Allergy Foundation of America (AAFA) has created a new resource for people who are concerned about allergens in the home.

Certification Program applies to:
- Toys
- Vacuum Cleaners
- Comforters and Bedding
- Flooring
- Washing Machines
- Air Cleaners

www.aafa.org
Future Workshops & Train-the-Trainer

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