



Air Quality and Health

POLLUTION AVOIDANCE AND PREVENTION

Outdoor

PROBLEM:

Exercising or bike commuting in polluted air.

PREVENTION:

- Check www.airnow.gov online for air quality before heavy outdoor exercise.
- Plan exercise for early morning when pollutants are generally at the lowest levels. (Note: certain geographic areas have wintertime inversions where smog accumulates overnight and burns off during the day. Denver, Colorado is one example. In these areas, early evening is the best time to exercise).
- Use commercial face-masks with appropriate filters, such as for particulate matter or harmful fumes.

PROBLEM:

Inhaling fumes from yard work using gas-powered equipment such as leaf blowers, lawn mowers, trimmers, and chainsaws. Paints, solvents, pesticides, and diesel motors also produce harmful fumes.

PREVENTION:

- Use electric or 'human-powered' equipment when possible.
- Use face-masks with appropriate filters (commercial filters are available for various toxins such as HEPA filters for particulates and activated charcoal for volatile fumes)
- Use low VOC (volatile organic chemical) paints, stains, and solvents if available.
- Eliminate environments that attract pests, and use natural deterrents to reduce pesticide use.

Indoor

PROBLEM:

Vapor-emitting materials in the home. Many are volatile organic chemicals like formaldehyde, and are released from vinyl, particle board, paints and stains, plastic furniture, cabinetry, carpeting, plastic shower curtains, flooring, printers and copiers.

PREVENTION:

- Choose untreated, naturally finished, handmade wood and natural fiber products when possible.
- Avoid placing printers or copiers near work areas.
- Reduce plastics and carpets in the home. When possible opt for non-treated wood or tile. This also helps reduce dust mites and dirt, and the use of chemical carpet cleaners.

PROBLEM:

Fumes from personal care and cleaning products such as perfumes, fragrances, air fresheners, scented lotions, hair spray, hair dye, perm treatments, stain removers, bleaches.

PREVENTION:

- Choose botanically-based (plant-sourced) products free of added fragrances, dyes, colors, and preservatives.
- Use the 'GoodGuide', www.goodguide.com, or the Environmental Working Group 'Skin Deep' Cosmetic database, www.ewg.org/skindeep, to search for high quality environmentally safe personal products.

PROBLEM:

Smoke from fireplaces and candles.

PREVENTION:

- Ensure proper operation and maintenance of fireplaces. Be sure firewood is completely dry before burning.
- Use, maintain, and regularly test smoke detectors and carbon monoxide detectors.

PROBLEM:

Radon, a colorless and odorless gas that can enter any building through cracks in the foundations or construction seams. It is produced by the decay of naturally occurring uranium in soil and water, and is associated with lung cancer. The risk of lung cancer rises as the radon level increases.

PREVENTION:

- Use commercial kits to check for radon, even in new construction. The EPA recommends taking steps to mitigate (reduce or remove source) for any levels above 4 picocuries/L.

PROBLEM:

Mold can grow in any wet or damp area and reproduce by means of tiny spores that float through the air. Allergic reactions range from sneezing to serious asthma attacks. Mold can also cause inflammation in the airways and eyes of non-allergic people.

PREVENTION:

- Inspect for mold growth in bathrooms, around water heaters, around windows, and in attic spaces and basements. Mold can grow in unexpected places, such as behind wallpaper, and comes in many colors including white, black, red, yellow, and green.
- Use a dehumidifier for humid environments. Ideal humidity for best air quality is below 50%.
- If a humidifier is used, inspect and clean it regularly

- Inspect and clean home heating system ductwork regularly.

Driving**PROBLEM:**

Pollution and fumes entering your vehicle when driving.

PREVENTION:

- Use the 'recirculation' button on your air conditioning controls when in heavy traffic. This dramatically reduces the amount of toxins entering your car. When not needed, turn it off to allow fresh air to enter.
- Consider carpool, biking, walking, or public transportation when possible.

POLLUTION MITIGATION:**Air Filter recommendations**

CHOOSE a pleated HEPA (High Efficiency Particulate Air) filter, which is the most efficient in removing fine particulates from indoor air. These are available as whole house filters as well as in smaller mobile units.

AVOID ozone generators, ionizers, and electrostatic filters—all of these can produce unwanted ground-level ozone which is harmful to health.

Other Consumer Resources

US Environmental Protection Agency Websites

- Learn the Issues: Air
<http://www.epa.gov/gateway/learn/airpollution.html>
- 'Indoor Air'
<http://www.epa.gov/iaq/ia-intro.html>
- Air: A Guide to Air Quality and Health.
Nathan Daley, MD, MPH
www.ecoholos.org