Breathing is Not Optional

Asthma is the most common chronic illness affecting children

Create healthy breathing zones:

Outdoor allergens
- **Pollens.** Bermuda grass lawns should be cut every 4-5 days, sprinkle daily during the growing period (April to November), and fertilize the summer, since it is a bad allergen. Eliminate plants known to produce allergic pollen. [http://allergy.peds.arizona.edu/southwest/]
- **Cockroaches.** Use Integrated Pest Management (IPM) to prevent cockroach, mouse, and other pest problems. [www.epa.gov/pesticides/ipm/index.htm]
- **Mold.** Fix leaks and moisture problems and thoroughly dry wet areas within 24-48 hours to prevent mold growth. Clean hard, moldy surfaces thoroughly. [http://www.epa.gov/mold/mold_remediation.html]
- **Pets.** Remove classroom animals from the school, if possible. If not, locate animals away from sensitive students and ventilation systems. [http://lancaster.unl.edu/pest/resources/DustMites311.shtml]

Outdoor irritants
- **Outdoor air pollution.** Air pollutants in Arizona cities are principally nitrogen oxides, ozone, carbon monoxide and particulates. Local sources of air pollution are traffic (greater than 40%), vehicle-generated paved road dust (10%), and dust from unpaved roads (8-10%). Pollution from automobile emissions (mainly nitrogen dioxide) increases in the winter, particularly on days with temperature inversion. As in other cities, use of oxygenated motor fuels contributes to aldehyde and other volatile organic compound pollution. Detailed daily information on air quality in Arizona can be found on the web sites for Tucson [http://www.airinfonow.org/], Green Valley [http://www.deq.co.pima.az.us/empact/default.htm], Maricopa County [http://www.maricopa.gov/AQ/], and Pinal County [http://co.pinal.az.us/AirQual/monitoring.asp]. Less detailed information on a number of cities in the Southwest is given by Weather.com [http://www.weather.com/activities/health/airquality/?from=ll&state=AZ]. On days when your State calls an Ozone Action Day or Pollution Advisory, people with asthma should limit prolonged physical activity outdoors. Consider adjusting outdoor activities to early in the morning or later in the evening. [http://www.azdeq.gov/environment/air/monitoring/links.html]

Indoor allergens
- **Cockroaches.** Use Integrated Pest Management (IPM) to prevent cockroach, mouse, and other pest problems. [www.epa.gov/pesticides/ipm/index.htm]
- **Mold.** Fix leaks and moisture problems and thoroughly dry wet areas within 24-48 hours to prevent mold growth. Clean hard, moldy surfaces thoroughly. [http://www.epa.gov/mold/mold_remediation.html]
- **Pets.** Remove classroom animals from the school, if possible. If not, locate animals away from sensitive students and ventilation systems. [http://lancaster.unl.edu/pest/resources/DustMites311.shtml]

Indoor irritants
- **Pest management.** Use non-chemical methods of pest management when ever possible. When using pesticides, follow the manufacturer's directions. Mix or dilute outdoors in a well ventilated area, that is nowhere near any air intake areas. Do not store unneeded pesticides inside buildings; dispose of unwanted containers appropriately. Since pesticides can be found far from the site of their original application, it is prudent to reduce the use of chemical pesticides outdoors as well as indoors. By appropriately fertilizing, watering, and aerating lawns, the need for chemical pesticide treatments of lawns can be dramatically reduced. [http://www.epa.gov/pesticides/ipm/index.htm]
- **Cleaning and maintenance practices.** Vacuum cleaners should be fitted with a HEPA filter system. Wet mop or wet dust cloth, never use a dry broom, dry dust cloth, or dry mop. General good housekeeping, and maintenance of heating and air conditioning equipment, are very important. Adequate ventilation and good air distribution also help. The key to mold control is moisture control. If mold is a problem, get rid of excess water or moisture and clean up the mold. Maintaining the relative humidity between 30 and 60% will help control mold, dust mites, and cockroaches. Consider damp dusting and high efficiency vacuum cleaners. Upgrade filters in ventilation systems to medium efficiency when possible and change frequently. Maintain HVAC systems on a scheduled inspection and cleaning program. [http://www.epa.gov/iaq/schooldesign/hvac.html]
- **Fragrances.** Perfumes, air fresheners, candles, incense, etc. all irritate respiratory conditions and should be avoided. [http://www.noattacks.org/triggers.html]
- **Fumes entering from outside.** Effective technologies to reduce PM2.5 include particulate filters and catalysts that can be installed on buses. An easy, no-cost, and effective way to control fine particulate matter is to minimize idling by buses. [http://www.azdeq.gov/function/about/bus.html]
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Technical Environmental Health Help:
- **Tools for schools.** [http://www.epa.gov/iaq/schools/]
- **HealthSEAT.** [http://www.epa.gov/schools/healthseat/index.html]
- **IAQ Building Education and Assessment Model (I-BEAM).** [http://www.epa.gov/iaq/largeblgs/i-beam_html/ibeam.htm]
- **School Advanced Ventilation Engineering Software (SAVES).** [http://www.epa.gov/iaq/schooldesign/saves.html]

Thank You for Caring for Our Children