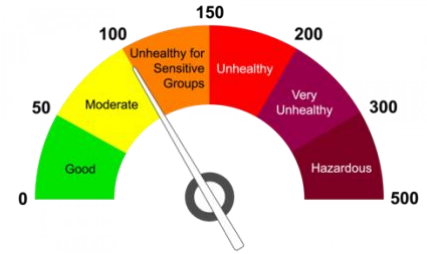


Air Quality Matters

According to the Yale Climate Connection, rising global temperatures are dramatically increasing the number and intensity of forest fires world-wide. On June 7, 2023, due to the drifting smoke from hundreds of wildfires in Canada, the air quality index in Bucks County was an unprecedented 403 on a scale of 500. Learning about the **Air Quality Index (AQI)** is becoming a necessary adaptive strategy, and this is the perfect time to share air quality information with family and friends.



Three issues are key: (1) the quality of the air we’re breathing (which can change from hour-to-hour depending on wind and sun conditions); (2) whether we’re in the group designated as “sensitive” to poor air quality (i.e., babies and young children, pregnant women, elderly people, and those with heart disease, asthma or other lung conditions); and (3) how well our homes are equipped to clear the air (e.g., air conditioners and HEPA filters).

Air quality. The Air Quality Index (AQI) measures two of the five key air pollutants regulated under the Clean Air Act: the concentration of **Ozone** and small particulates (**PM_{2.5}**) that bypass the lung’s natural defenses. Two sites that can provide accurate and timely information are the federal EPA website [AirNow.gov](https://www.airnow.gov) (a national network of government sensors) and [MAPS.PurpleAir.com](https://maps.purpleair.com) (a nation-wide, citizen-scientist project where individuals put up back yard air monitors that measure the air quality every 10 minutes). The top of the AQI index is 500. It’s color-coded to indicate the severity of the air quality. Green (0-50) or Yellow (51-100) is considered good-to-moderate air quality. Orange (101-150) is unhealthy for those who are sensitive to poor air quality. Red (151-200) is unhealthy for all people. Purple (201-300) is very unhealthy for all, and Dark Purple (over 300-500) is considered hazardous.

If you’re in the “sensitive to air quality” group. Unhealthy air quality is easy to ignore when you can’t see it or smell it. Micro-particles (or “particulate matter”) are smaller than the diameter of a human hair and easily by-pass the lung’s ability to filter them out enter the blood stream. Ground level Ozone is created by motor vehicles, power plants, incinerators, and other sources of chemicals that react with sunlight. Ozone can inflame airways, increase respiratory conditions, and cause coughing or scratchy throat.

Adaptive strategies. My husband Richmond Shreve has asthma. He purchased two sensors from PurpleAir.com—one to put outside our apt. at Pennswood and one to put inside our apt.). Knowing that his lungs are impaired, he wanted to have immediate, local information about the air quality. On Father’s Day when the AQI climbed to 98 outside, with our A/C running and two Heppa filters in our apt., the AQI inside was 2.

The Delaware Valley Regional Planning Commission issues a “Code Orange” air quality alert when the AQI is above 100 in Bucks County. This is announced on the weather programs on our smartphones, TVs and radios. It’s a notice to stay indoors, avoid strenuous activity or outside exercise, wear an N95 mask if you have to be outside, and have children play inside.

What you can’t see or smell can hurt you!

(Marguerite Chandler for the EarthCare Committee)