

How does air pollution affect children?

Air pollution is unhealthy for everyone but especially children, the elderly, and those with existing respiratory conditions. Children breathe 50% more air than adults per pound of body weight and are more likely to engage in vigorous activity outdoors.

Ozone and fine particulate matter are two common air pollutants. Ozone can damage lung tissue, reduce lung function, and aggravate asthma or other respiratory diseases.

- Ozone forms when ultraviolet light comes in contact with hydrocarbons and other volatile organic compounds that are associated with burning of fossil fuels.
- Although ozone exists naturally in the upper atmosphere and protects us from harmful ultraviolet radiation, it becomes a pollutant at ground level and is particularly problematic during hot, dry summertime conditions.

Particulate matter is harmful to breathe because it can pass through the nose and throat, lodging in the lungs.

- Particulate matter is a general classification of particulates that can include a variety of substances such as dust, metals, acids, and allergens.
- Sources of particulate matter exist year-round. Particulate matter pollution is especially bad during the winter when cold air gets trapped in valley floors, keeping particulates near the ground. Wildfire smoke can cause increased particulates during the summer and fall months.

For more information

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Lewiston

1118 F Street
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(208) 799-4370
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Pocatello

444 Hospital Way #300
Pocatello, ID 83201
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Twin Falls

650 Addison Ave. W,
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(208) 736-2190
toll-free: (800) 270-1663

Web Resources

DEQ Daily Air Quality Reports and Forecasts:
www.deq.idaho.gov/daily-air-quality-reports-forecasts

US Environmental Protection Agency AIRNow
www.airnow.gov/



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Children and Air Quality



What schools can do to protect students' health



Idaho Department of
Environmental Quality
www.deq.idaho.gov



How can schools find out when air pollution is high?

The Idaho Department of Environmental Quality (DEQ) monitors and measures air pollutants throughout Idaho. Based on this data and meteorological conditions, DEQ issues daily air quality forecasts. Daily measurements of air pollutants and air quality forecasts can be accessed on DEQ's website at www.deq.idaho.gov/daily-air-quality-reports-forecasts. On this website you can subscribe to e-mail alerts to be notified of daily reports in your region.

The air quality forecast is reported using the Air Quality Index (AQI). The AQI incorporates the concentrations of five different pollutant types (including ozone and particulate matter) into one color-coded scale. AQI values range from 0 to 500, with higher values indicating worsening air quality.

Air Quality	AQI
Good	0–50
Moderate	51–100
Unhealthy for Sensitive Groups	101–150
Unhealthy	151–200
Very Unhealthy	201–300
Hazardous	>300

Schools located near any of the state's real-time air quality monitoring stations can also check on air quality by visiting airquality.deq.idaho.gov. These monitors located throughout the state provide real-time air quality data translated into AQI levels.

What should schools do during periods of decreased air quality?

- ▶ On *moderate* air quality days, monitor children with respiratory problems and limit vigorous activities for sensitive groups.
- ▶ On days with air quality in the *unhealthy for sensitive groups* category, children with respiratory problems should stay indoors and all children should have the opportunity to stay indoors. Vigorous outdoor activities should be limited or modified for all children.
- ▶ During periods of *unhealthy* air quality, sensitive groups and any children experiencing difficulties should remain indoors. Any outdoor activities should be light and limited in duration. Consider rescheduling any outdoor sporting events.
- ▶ On *very unhealthy* air quality days, keep all children indoors and reschedule or relocate sporting events.
- ▶ When air quality reaches the *hazardous* level, all people should stay indoors and avoid any exertion.

For more detailed information about how to handle recesses, physical education classes, sporting events, and practices for each AQI category, visit DEQ's website at www.deq.idaho.gov/media/887952-wildfire-table-for-schools.pdf.



How should outdoor activities be modified during poor air quality conditions?



Consider reducing the intensity and duration of outdoor activities or changing the timing of outdoor events.

Intensity

Examples of low to moderate intensity activities include walking, softball, shooting baskets, and stretching. Avoid vigorous activities such as running, football, soccer, competitive basketball, or any other activity that involves sustained cardiovascular effort. Coaches and teachers can reduce intensity by focusing on skills development, rather than endurance and training.

Duration

When air quality is poor, shorten outdoor activities, incorporate additional breaks, or make more frequent substitutions during sporting events. If possible, shorten the outdoor portion of activities by moving inside for part of the practice or event.

Timing

Air quality can differ throughout the day. If possible, change the timing of practices to coincide with better air quality, or split practices into two parts.