

Minnesota Outdoor Air Quality Guidance for Schools and Child Care

The following recommendations will help schools and child care staff determine when and how to adjust outdoor activities when air quality starts to reach unhealthy levels. Adjust activities accordingly to help children stay active while protecting their health. Guidance for intensity of activities is provided by the [Centers for Disease Control and Prevention \(www.cdc.gov/nccdphp/dnpa/physical/pdf/pa_intensity_table_2_1.pdf\)](http://www.cdc.gov/nccdphp/dnpa/physical/pdf/pa_intensity_table_2_1.pdf).

OUTDOOR ACTIVITY DURATION

Air Quality Index	15 minutes to 1 hour	1 to 4 hours	4-plus hours
Good (0-50)	Good day to be outside!	Good day to be outside!	Good day to be outside!
Moderate (51-100)	No limitations for most children. For students with health conditions, consider alternatives or modified participation.	Be aware and monitor students with health conditions for changes in their health. Limit activities to light intensity.	Consider moving students inside or to an area with better air quality. Limit to less intense activities and/or limit duration of activity.
Unhealthy for Sensitive Groups* (101-150)	Limit activities to light intensity. Take breaks every 20 minutes. Make indoor space and activities available for sensitive children.	Limit activities to light intensity. Take breaks every 20 minutes. Activities with moderate to heavy exercise intensity should be canceled, rescheduled, or moved indoors.	Limit activities to light intensity and less than four hours in duration. Take breaks every 20 minutes. Activities with moderate to heavy exercise intensity should be canceled, rescheduled, or moved indoors.
Unhealthy (151-200)	Cancel or reschedule all outdoor activities. Keep all students indoors and activity levels light.	Cancel or reschedule all outdoor activities. Keep all students indoors and activity levels light.	Cancel or reschedule all outdoor activities. Keep all students indoors and activity levels light.
Very Unhealthy (201-300)			
Hazardous (301-500)			

*Unhealthy for Sensitive Groups: People with health conditions, or their caregivers, should manage conditions medically. Watch for symptoms, and for worsening symptoms, and have medications handy. Take action with a health care provider as needed.

FREQUENTLY ASKED QUESTIONS AND ANSWERS

What is the air quality index (AQI)?

The Air Quality Index is a guide for reporting daily air quality. It uses colors and numbers to show how clean or polluted the air is with ground-level ozone and particle pollution. The higher the AQI value, the greater the level of air pollution and the greater the health concern.

When the forecast is for AQI values to reach or exceed 101, an air quality alert is issued to help protect people's health from the effects of exposure to air pollution.

How do I know when air quality is unhealthy?

Before canceling or rescheduling an outdoor athletic event or activity, check the [Minnesota Pollution Control Agency's air quality web page \(www.pca.state.mn.us/air-water-land-climate/current-air-quality-conditions\)](http://www.pca.state.mn.us/air-water-land-climate/current-air-quality-conditions) for real-time information and daily forecasts.



Be prepared and air aware.

Stay informed about current air quality by signing up for [Air quality notifications \(enviroflash.info/signup.cfm\)](http://Airqualitynotifications.enviroflash.info/signup.cfm).



apps.apple.com/us/app/epa-airnow/id467653238



play.google.com/store/apps/details?id=com.saic.airnow&pli=1

Download the EPA'S AirNow Mobile App for [Apple](#) or [Android](#) to quickly check current and forecast air quality.



Speak with an air quality forecaster for more detailed information:
612-251-5703.

How long can students stay outside when the air quality is unhealthy?

There is no exact amount of time; both short-term and long-term exposure to air pollutants can cause a variety of health problems. As air quality gets worse, the more important it becomes to take breaks, lower the intensity of activities, and watch for symptoms. Remember that students with health conditions are more sensitive to unhealthy air..

What symptoms should I look for in students when the air quality is unhealthy?

Symptoms of particulate pollution include burning eyes, coughing, itchy throat and nose, and shortness of breath. Asthma symptoms can include:

- Coughing
- Wheezing
- Shortness of breath
- Chest tightness

Even students who do not have asthma could experience these symptoms.



Do not ignore symptoms. Any student with symptoms should take a break until symptoms resolve, then do a less intense activity. When air quality is very poor, stop all outdoor activities. Students with asthma should follow their written asthma action plans and use quick-relief medicine, as prescribed. If symptoms do not improve, get medical help.

What activities can students do to stay active?

When air quality is unhealthy, indoor activities can still keep kids active and engaged! General physical activities can be defined by levels of intensity. Here are a few examples of how to stay active:

- Light intensity: playing board or card games, playing catch
- Moderate intensity: playing with a Frisbee, jumping or skipping, walking, playing on school playground equipment, playing a musical instrument
- Vigorous intensity: running, basketball, kickball, swimming, soccer, cheering, karate

Find more physical activity recommendations at [CDC: Physical Activity for Different Groups \(https://www.cdc.gov/physicalactivity/basics/age-chart.html\)](https://www.cdc.gov/physicalactivity/basics/age-chart.html).

Find more [Indoor Air Quality Activities for Kids \(www.lung.org/clean-air/indoor-air/building-type-air-resources/at-school\)](http://www.lung.org/clean-air/indoor-air/building-type-air-resources/at-school) and lessons for teachers and caregivers of children pre-k through middle school.

Are certain times worse for air pollution?

Ground-level ozone and fine particulate pollution are two major air pollutants most likely to cause health concerns in Minnesota.

Ozone pollution is worse in the afternoon on hot, sunny days and into the early evening, from late May through August. Plan outdoor activities in the morning when air quality is better, and it is cooler.

Fine particle pollution can be high any time of day. In Minnesota, fine particle levels in outdoor air can be high in both winter and summer. Since vehicle exhaust contains particle pollution, limit activity near idling cars and buses and near busy roads, especially during rush hours. Also, limit outdoor activity when smoke is in the air

Recent wildfires and ozone pollution have increased air quality alerts across Minnesota. A dry summer without precipitation increases the risk for wildfires.

How can I be proactive with air quality alert days?

These health concerns and cautions due to air pollution should be taken seriously. It is important that school health office staff work closely with other school personnel as well as with students, parents, and health care providers, as they are essential partners in the control and management of asthma and other health conditions. Support students in self-managing their asthma and ensure they understand their written asthma action plan and have medications on hand in case of a respiratory emergency when air becomes unhealthy.

We encourage school officials to use caution when communicating about air quality alerts. Just a reminder, there is an increase in stress and anxiety associated with this knowledge about climate change for some students. It can be overwhelming and even traumatic for some children. Share information without overstating or using dramatic language, and moderate the discussion for those who fixate on it or express significant fear or stress.

Additional resources on air pollution

- [Air Quality – Minnesota Department of Health \(www.health.mn.gov/communities/environment/air\)](http://www.health.mn.gov/communities/environment/air)
On most days in Minnesota, our air is clean and healthy to breathe. However, on some days, events like weather and wildfire smoke can create unhealthy air.
- [Air Quality, Climate and Health – Minnesota Department of Health \(www.health.mn.gov/communities/environment/climate/air.html\)](http://www.health.mn.gov/communities/environment/climate/air.html)
How does climate change impact air quality? Air pollutants like particulate matter, ozone, and pollen are likely to be increased by climate change and result in negative health impacts.
- [Air quality and health – Minnesota Pollution Control Agency \(MPCA\) \(www.pca.state.mn.us/air-water-land-climate/air-quality-and-health\)](http://www.pca.state.mn.us/air-water-land-climate/air-quality-and-health)
Exposure to air pollution can affect everyone’s health. Find more information on the health impacts of breathing in air pollutants.
- [AirNow – EPA data on air quality \(www.airnow.gov\)](http://www.airnow.gov)
Get air quality data where you live, by ZIP code, city, or state.
- [HeatRisk – National Oceanic and Atmospheric Administration and CDC \(https://ephtracking.cdc.gov/Applications/HeatRisk/\)](https://ephtracking.cdc.gov/Applications/HeatRisk/)
Forecast tool and dashboard for extreme heat risk.

Additional resources on asthma

- [Asthma – Minnesota Department of Health \(www.health.mn.gov/diseases/asthma\)](http://www.health.mn.gov/diseases/asthma)
Asthma is a chronic disease of the airways that makes breathing difficult. This site has information on how to manage it and live well with asthma as well as resources and tools for professionals who help people with asthma.
- [Asthma Management in Schools – Minnesota Department of Health \(www.health.mn.gov/diseases/asthma/schools\)](http://www.health.mn.gov/diseases/asthma/schools)
School staff are essential partners in helping students to successfully manage their asthma. These pages offer guidance and resources for school staff to help them identify, prevent, and manage asthma symptoms in the school setting.
- [Patient-Centered Asthma Care – Minnesota Department of Health \(health.mn.gov/diseases/asthma/professionals/healthcareprofessionals.html\)](http://health.mn.gov/diseases/asthma/professionals/healthcareprofessionals.html)
Asthma care is a partnership and a shared responsibility between the patient, the health care provider, and the systems supporting them. Asthma can be controlled through effective asthma management using the guiding principles of patient-centered care.
- [Athletes and Asthma: The Community Coach’s Role training course – Minnesota Department of Health \(athletesandasthma.mn.gov\)](http://athletesandasthma.mn.gov)
Find more information about how asthma affects kids playing sports and other activities and how you can help your players control their asthma.

Contact information

Minnesota Department of Health Asthma Program
health.asthma@state.mn.us | 651-201-5909 | www.health.state.mn.us/asthma

