

FAQs: Washington Children and Youth Activities Guide for Air Quality



The [Washington Children and Youth Activities Guide for Air Quality](#) includes public health recommendations to protect children and youth (18 years and younger) from fine particulate matter (PM_{2.5}). These best practices are based on current research and expertise in both air quality and pediatric health. We rely on the subject matter expertise of educational leaders and local public health to integrate our recommendations into the complexity of decision-making for children and youth activities. We designed this FAQ to help interpret the Washington Children and Youth Activities Guide for Air Quality; it is not meant to replace it.

Q: To which children and youth activities does this guide apply?

This guidance applies to a broad range of outdoor activities for children and youth (18 years and younger), including activities during school, child care, athletic practices and games, before- and after-school programs, camps, field trips, and other outdoor programming and activities. The duration of the activity (left column of the guidance) is meant to include the full time of the activity, start to finish. The time spent in transit may also be part of the activity duration, depending on outside exposure. For example, riding a bus with windows opened would have similar fine particulate matter (PM_{2.5}) levels as outdoors.

Q: What is the rationale for the recommendations in the guide?

The guiding principle of these recommendations is to reduce exposure to PM_{2.5} by limiting total time outside and reducing intensity levels of physical activity.

Reducing the intensity levels of physical activity decreases the breathing rate, and correspondingly reduces the amount of pollution that is inhaled into the body. Compared to being at rest, children and youth's breathing rates increase over 2 times during light intensity physical activity, 4 times during moderate intensity activity, and over 8 times during high intensity activity compared to being at rest.

Q: What is different about children and youth compared to adults?

Children and youth (18 years and younger) are classified as a sensitive group because their bodies are still developing. The respiratory system is not fully mature until young adulthood. There is the potential for lifelong consequences with elevated childhood exposures to PM_{2.5}. Children and youth also breathe more for their body weight than adults, putting them at greater risk for higher doses of PM_{2.5}.

Children and youth with health conditions (including asthma and other lung diseases, heart disease, and diabetes) are an especially sensitive group. Some children and youth with health conditions might have undiagnosed conditions and not be aware of their increased risk.

Q: What does “consider canceling” mean in the Unhealthy for Sensitive Groups category for 1-4 hours of activity?

The activity duration of 1-4 hours often encompasses athletic games, practices, and events. For 1-4 hour activities at the Unhealthy for Sensitive Groups level, the recommendation is to “consider canceling outdoor activity or move to an area with safer air quality”. At the Unhealthy for Sensitive Groups level, there are several factors to weigh when considering to cancel, including but not limited to:

- Can the decision be made at the time of the event, or does the decision need to be made well in advance?
- Are smoke conditions getting worse, getting better, or staying about the same?
- Can the event be postponed or rescheduled?
- Is the AQI closer to 101, or closer to 150?
- Is there an option to relocate to an area with cleaner air, either indoors or another outdoor location?
- Have steps been taken to reduce activity duration and intensity?
- How much or to what extent can individuals’ duration of vigorous intensity be reduced? Can breaks and substitutions be increased?
- Are there extenuating circumstances in determining whether an athletic practice or competition can be held? (E.g., required for eligibility, league competitions, post-season/state competition)
- Where will children and youth spend their time if activities are canceled? Is the air quality better there?
- While moving to another location, will children and youth be more exposed during transit than if they had remained indoors?
- Are there other options for safe physical activity when air quality is poor?

Q: What about indoor activities when outdoor PM_{2.5} levels are very high?

When the Air Quality Index (AQI) reaches Unhealthy and worse (Very Unhealthy and Hazardous), the recommendation is to “limit to light intensity activities indoors if indoor PM_{2.5} levels are elevated.” At these AQI levels, it is likely that indoor levels will be elevated unless there is good filtration. You can use indoor low-cost sensors to help identify levels to inform indoor activity decisions. If indoor monitoring is not possible and/or indoor PM_{2.5} levels are unknown, assume indoor levels are similar to outdoor levels and increase steps to reduce exposure, including limiting to light indoor activities and increasing indoor air filtration. (See Appendix B, “Indoor Air Quality Monitoring” and Appendix C, “Improving Indoor Air Quality”).

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