FITNESS & EXERCISE

When the Air Is Too Dirty for a Run

The air can look perfectly clear and still change your run; one quick check tells you whether to go, adjust or move indoors.

The run starts before the doorstep

Your shoes are on, your route is settled, and the sky looks harmless. But the decision that matters may not be visible from the window: what is suspended in the air you are about to breathe harder.

Outdoor pollution can include gases and solid particles from car emissions, factories, dust, pollen, mould spores and smoke. Ground-level ozone is a major part of urban smog. Particle pollution includes dust, dirt, soot, smoke and liquid droplets, some of them too small to see. A blue sky is not an air-quality report.

Running changes the calculation because it is strenuous. Public-health guidance specifically warns that a Code Orange ozone forecast can hurt a runner even if that runner is healthy. When ozone or particle pollution is high, the advice is to reduce how hard you work outside, change the time or place, or exercise indoors.

This is not an argument for becoming frightened of outdoor air. It is an argument for checking it. The Air Quality Index (AQI) forecasts major regulated pollutants, including ozone and particle pollution, and indicates when the air may be unhealthy. Treat it as part of the weather, not an emergency bulletin you consult only when smoke is obvious.

Code Orange is your cue to adjust

Code Orange means the air is unhealthy for sensitive groups. It does not automatically require everyone to cancel every outdoor plan. It does mean that an ordinary run deserves another look, particularly because runners breathe harder than people doing easier outdoor activities.

If ozone is driving the warning, shortening the run, walking instead or using a treadmill indoors are all supported alternatives. You can also move the activity to a period when ozone is forecast to be lower. General guidance says ozone levels are usually lower in the morning and evening, but the local AQI forecast should guide the decision rather than the appearance of the sky.

If particle pollution is responsible, the adjustment is similar: choose something less intense so

that you do not breathe as hard. Walking instead of running is the clearest swap. Busy roads and highways are also poor alternatives because particulate matter is usually worse near vehicle emissions.

Code Orange is not a test of commitment. The useful question is not whether you could force the planned run through it, but whether the same movement can happen with less exposure. A shorter, easier or indoor session preserves the activity without pretending the air is irrelevant.

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Ozone and particles do different damage

Ozone can irritate your lungs and throat. It has been linked to coughing, pain when taking a deep breath, wheezing and difficulty breathing during exercise or other outdoor activity. Anyone can be affected, although people with asthma or another lung disease, older adults, babies and children, and people working or exercising hard outside are more likely to be bothered.

Particle pollution demands attention for a different reason. Larger particles, known as PM10, can irritate the eyes, nose and throat. Smaller particles, known as PM2.5, can reach deep into the lungs and may even enter the blood. Particle pollution has been linked to breathing trouble, lung cancer, heart attacks and other forms of heart disease.

People with lung disease, heart disease or diabetes, older adults, babies and children are among those more likely to be affected by particle pollution. It has also been linked to heart attacks, strokes and death among people with heart disease. If you have asthma, both ozone and particle pollution can make your symptoms worse; follow your asthma action plan when pollution is high.

Coughing, pain with a deep breath, wheezing or trouble breathing during an outdoor run are not signals to bargain with. Stop treating the day as a fitness-planning problem. If you have breathing or heart disease, or questions about symptoms and air pollution, speak with your healthcare professional rather than inventing your own threshold.

Moving indoors is not always the whole answer

An indoor treadmill can take you away from high outdoor ozone or particle levels, but "indoors" does not automatically mean clean. Homes and offices can contain mould, pollen, tobacco smoke, household products, pesticides and gases such as radon and carbon monoxide. Building materials can also contribute pollutants.

Indoor air-quality problems often cause discomfort that improves when the source is removed. Some pollutants, however, are associated with diseases that appear much later, including respiratory disease and cancer. Ventilation and removing the source of pollution can improve indoor air quality.

That distinction matters when you make a last-minute switch. A smoky room or a space with an obvious mould problem is not a sensible refuge simply because it has four walls. The evidence supplied here does not establish that every indoor exercise space is safer than every outdoor route; it supports choosing a better time, an easier activity, a different place or an indoor option when outdoor pollution is high.

Nor does changing one run mean exercise has stopped mattering. Among adults with heart failure, a 2024 review of 60 trials found that exercise-based cardiac rehabilitation probably reduced hospital admissions and improved disease-specific quality of life, although it did not show a short-term mortality difference. The point is not to abandon movement. It is to separate movement from avoidable exposure.

Make one check before you lace up

On your next running day, check the local AQI before leaving. That takes a phone or computer with access to an AQI forecast; local television weather forecasts and free email alerts are alternatives. Check again when travelling, because the air at your destination may not resemble the air at home.

Look for the pollutant behind the forecast, not only the colour. If Code Orange is driven by ozone, choose a lower-ozone time, shorten the run, walk or move to a treadmill indoors. If particle pollution is high, reduce the intensity and avoid busy roads and highways.

Decide on the substitute before you need it. Keep walking shoes ready for an easier outing, or identify an indoor place with acceptable air and a treadmill. That removes the small negotiation that begins when the forecast conflicts with the workout you imagined.

The habit for this week is simple: put an AQI check beside the weather check on your phone or computer. Your running shoes tell you that you are ready to go. The forecast tells you whether outside is ready for you.

Where this comes from

- Air Pollution

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- Indoor Air Pollution

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