

THE DIRT ON SMOG

by Laura Bickle (*Fresh Juice*, June/July 2012)

Tips for breathing a little easier this summer.



With summer comes smog, and that can be bad news for your health. But there are ways to protect yourself. Read on to learn how to keep smog from putting a cloud over your summer riding.

What is smog?

When you think of smog, you probably envision a brown or yellow haze hanging in the air. *"Smog can also be invisible, and when you're right in the middle of it, you can't see it,"* says medical toxicologist Monica Campbell, who is the director of healthy public policy at Toronto Public Health and has authored studies on smog for health Canada.

Visible or not, smog is a nasty mix of ground-level ozone—caused mostly

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from burning fossil fuels—and particulate matter, which is particles from industrial and vehicle emissions, construction, road dust, agriculture and wood burning. Smog exists year-round but is worse in the summer because heat and sunlight exacerbate the chemicals in air pollution.

Studies have shown a connection between high smog levels and increased emergency-room visits. Long-term exposure to smog can cause reduced lung capacity, decreased resistance to infections, increase risk of heart and lung conditions and premature death.

Are you at risk?

Anyone can suffer the health effect of air pollution, but some people are more susceptible; for instance, kids breathe faster than adults and take in more air. *"They're exposing themselves to a large dose of pollutants than an adult would,"* says Campbell. Outdoor workers also get a large dose since the longer you're exposed to bad air, the more you'll breathe

in. Smog intensifies symptoms for those with allergies, heart disease and lung conditions such as asthma,

emphysema and chronic bronchitis.

Smog and exercise

Here's a cruel reality: while physical activity is undoubtedly good for your health, doing it in polluted air puts you at risk. Why? When you're active, you breathe in more air and, therefore, more pollutants. Of course, that's not an excuse to shelve exercise; just consider taking your workout indoors or running or cycling in the morning when the risk is lower, and choose an area that isn't close to roadways, especially important to avid cyclists or joggers on city streets. Avoid exercising in later afternoon and early evening, when the air quality tends to be worse. Breathing through your nose also helps filter contaminants.

Know the enemy

The key to outsmarting smog is to know when you're at risk. The recently introduced online Air Quality Health

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Pollution is worse when several weather conditions converge, so be on the lookout for any combination of the following:

- * Little or no wind: results in a buildup of pollutants
- * An inversion: warm air moves over a cooler, denser air mass, trapping pollutants
- * Winds from the south and industrialized area: result in a transfer of pollutants from the USA, Ontario, and Québec
- * Cloudless skies: results in higher penetration of UV radiation

SMOG SIGNALS

Signs that poor air quality may be effecting you.

- irritated eyes, nose and throat
- increased phlegm or mucus production
- coughing and wheezing
- breathing difficulty
- worsening of symptom for those with asthma and other lung conditions.



Index (AQHI; www.ec.gc.ca/cas-aqhi) is designed to do just that. "It reflects the health risk associated with air quality," says Campbell, who was involved in the tool's development. It operates on a 10-point scale, with 1 being low risk. The AQHI is updated every three hours and offers two ratings: one for at-risk populations and one for the general public. It also forecasts conditions for the next day, so you can adjust plans if needed.

The cleanup solution

While it's important to take precautions on smoggy days, wouldn't it be great if there were none? "The ultimate answer is to clean up air quality," says Campbell. "We

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need more use of public transit, more walking, more cycling, less reliance on the combustion of fuel.” You can help at home by conserving energy; the web site for Natural Resources Canada’s Office of Energy Efficiency (www.oeenrcan.gc.ca/home) offers lots of tips and ideas, plus a Kids’ Club to get youngest in on the act. *“What I really want people to know is that they can be part of the solution,”* says Campbell.