Wildfire and indoor air quality

July 17, 2026

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Dear UTFA Colleagues,

I am pleased to share an updated summary of best practices guidance regarding exposure to wildfire smoke, originally prepared by UTFA Council representative and ASHRAE Fellow Prof. Jeffrey Siegel for his constituents, which was shared by UTFA last summer.

We are grateful to Prof. Siegel for allowing us to share this resource more broadly with colleagues across the University. We hope that this guidance will be helpful to those who may be affected by wildfire smoke exposure and provide useful information for maintaining health and safety during periods of poor air quality.

You can find more details of how you can stay safe **here.**

Sincerely,

Jun Nogami

UTFA President

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Wildfire smoke is a mix of gas phase and particle pollutants, many of which are known to have health impacts. We have good control approaches for the particles and so we tend to focus on them (with good reason, they are an important component of the health risk), but the risk is broader than that addressed below.

Although the exposure is unhealthy for everyone, there are many who are at higher risk. They include the very young (including expectant individuals), the elderly, those with respiratory, cardiac, and

cardiovascular disease, those who have asthma and allergies, and a variety of other susceptibilities that are exacerbated by poor air pollution. And, the concentrations are very high and so this guidance is intended for everyone. Further, extreme heat is a risk factor for many on its own (often even larger than the wildfire smoke risk) and so we are balancing multiple risks for many.

1. Minimize time outdoors. Balance the value of outdoor exercise with the increased exposure that will result, especially at higher breathing rates. I don't exercise outdoors when there is even moderate air pollution.
2. Wear a well-fitting high quality respirator type mask when you are outdoors. The particles that cause harm are all small enough to require high quality filtration and so there is considerably less benefit (although still some) from using a lower quality mask. This is essential for those who are in high risk categories. Many should consider wearing these masks indoors as well. I wear an N95 mask.
3. Close doors and windows. A caveat to this point is that extreme heat is huge risk for some parts of the population and can be more serious than the exposure to wildfire smoke and so the balance between reducing exposure to smoke if the temperature inside gets warm is important.
4. If you have a central forced air system, operate the fan continuously if you have a MERV 11 or better filter. A MERV 13-15 is preferred. MERV 8 and lower do very little for the particles that are at issue here.
5. Operate portable filters in occupied spaces. The same guidance from COVID applies about filters (eg, sized appropriately for the room, operated on as high flow as possible).
6. Support those in your community who are at higher risk, live and/or work outdoors, do not have access to resources for things like masks and filters, and have to balance extreme heat risk with wildfire exposure risk.

I have received some specific questions about protecting staff and students on the UofT campus. There are a variety of different spaces on campus with different exposures to outdoor air pollution and so it gets complicated, but three things that I suggest are:

A. I would give staff/students the option of working from home during wildfire-impacted and heat stress periods. This will cover the diversity of susceptibilities, home conditions, office conditions, as well as things like commute length/type. For some, it may be safer to be on campus.

B. If there are (modest) resources, I would invest in some improvements. The specific first improvement is making N95 masks available (you can get them from the MedStore, among other places) and people can wear those on their commute. Mask availability has been shown to overcome a lot of hesitation to use.

C. The second improvement requires more resources, but portable air cleaners (even the homebuilt DIY ones) are huge in protecting people from most of the harm from wildfire smoke. Having those that you can move around to where staff are/where the need is helpful. Some spaces are likely served by the central HVAC system and probably have good enough filtration and could be lower priority for PARcs. Some spaces might have to have open windows because they are not well-served by air conditioning and they are higher priority. Some students/staff will want them and others less and so again it is usually making them available goes a long way.

As always, feel free to reach out with specific questions and for more detailed resources.

Jeff

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