

## **Ahhhchoo! Climate change could be making allergy season worse in Lansing**

By Sarah Lehr

Whitney Spotts closes her windows when her neighbors start mowing their lawns.

Spotts suffers from severe allergies, and spring is especially challenging for her as cottonwood trees bloom and grass grows.

"It's a horrible Catch-22 because I love the spring, I love spending time outside," Spotts said. "As soon as we start opening windows, my face goes nuts."

Some days she finds her car coated in pollen, but says wearing a mask amid the COVID-19 pandemic has helped reduce her exposure. In fact, Spotts, the lead singer in the cover band Starfam, has been wearing a HEPA filter mask for years before concerts to stop her throat from getting itchy and sore.



Global climate change could be making allergy season worse for people like Spotts. Warming temperatures mean plants like ragweed can last longer, blooming earlier in the year and dying later. And allergy season may be getting more intense, since rising carbon dioxide levels are linked to plants spewing more pollen.

“The people who are allergic tend to have more symptoms and there’s a longer period of time when they can have symptoms,” said Dr. Mitchell Grayson, chair of the Asthma and Allergy Foundation of America's Medical Scientific Council. "The fact is that climate change is worsening the allergy season which is making life more miserable for people with allergies and asthma."

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## Analysis: Lansing growing season increased by 28 days over half century

Over the last 50 years, the growing season in Lansing has increased by 28 days, according to an analysis from Climate Central, a nonpartisan nonprofit.

That's greater than the average increase of 23 days across more than 200 cities analyzed. Climate Central measured the growing season from the time of the first spring thaw to the first fall freeze and found that, in general, temperatures conducive to the growth of pollinator plants are starting earlier and lingering later.

“Frost kills the pollen and that’s happening later,” said Dr. Ryan Thomas, a pediatric pulmonologist and an assistant professor with Michigan State University's College of Human Medicine. “Data suggests we’re seeing two to three weeks increase in our pollen season and symptoms can be prolonged.”



## CO2 linked to plants creating more pollen

Carbon dioxide levels are increasing as people burn fossil fuels, creating a greenhouse gas effect that traps heat in the atmosphere.

CO2 is essentially food for plants and higher levels can cause plants to produce more pollen, studies show.

A 2014 study of Timothy grass found the plant's pollen production increased linearly as carbon dioxide exposure rose. When carbon dioxide levels rose to 800 parts per million — roughly twice the current level of CO2 — the grass's pollen production increased by 53%. The increased pollen output persisted even when scientists exposed the plants to elevated levels of ozone, a gas that can damage plants and suppress their survival.

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Kathleen Felice Slonager, a registered nurse and certified asthma educator, suggests people cope with an extended and more severe pollen season by showering at the end of the day and keeping clothes in a hamper outside the bedroom. They can wipe down their pets before they come inside and check weather reports for pollen counts.

But Slonager, the executive director of Michigan's AAFA chapter, acknowledges many environmental changes are beyond a patient's control.

"That's a big concern because people can mitigate triggers in their home and I can teach them," she said. "It's hard when they have to go outside and they have huge issues with increased pollen and increased air pollution that they have no control over."

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Longer allergy season has itchy implications for tens of millions of Americans

A worsening allergy season has itchy implications for as many as 60 million Americans who suffer from allergic rhinitis, the scientific name for hay fever. Their bodies interpret allergens as a threat and respond with symptoms like sneezing, congestion and sinus pressure.

Millions of Americans suffer from allergic asthma and allergens like pollen can cause them to have trouble breathing or trigger an asthma attack.

"It's not just people having a runny nose and itchy eyes," Thomas said. "Some people are really going to have life-threatening consequences as a result of worsening climate change."

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Extreme weather events are worrisome for people with allergies and asthma, Slonager said. Wildfire smoke is full of polluting particles. Droughts create dust and flooding can lead to mold.

"The more we can electrify our country, the more we have policies that recognize climate change, the better health we're going to have," Slonager said.

*Contact reporter Sarah Lehr at [slehr@lsj.com](mailto:slehr@lsj.com). Follow her on Twitter [@SarahGLEhr](https://twitter.com/SarahGLEhr).*