One Pollutant Ups the Risk of Uterine Fibroids in Black Women

High ozone levels in polluted air are linked to an increased risk for uterine fibroids among Black women.

May 24, 2021 By Casey Halter

The journal Human Reproduction recently reported that elevated levels of ozone found in air pollution are linked to an increased risk for uterine fibroids among Black women. The findings expand on prior research showing that Black people in the United States are exposed to more air pollution and take a deeper look at the effects of those health inequities.

Uterine fibroids develop in and around the womb and are a very common reproductive health issue. Diagnosed in 25% to 30% of all premenopausal women, these noncancerous growths are frequently found up to two to three times more often in Black women. (However, researchers think fibroids may affect up to 70% to 80% of women.)

For this latest study, researchers checked for concentrations of particulate matter smaller than 2.5 microns as well as nitrogen dioxide and ozone across 56 U.S. cities between 1997 and 2011. Scientists then compared these data with information gleaned from 21,998 premenopausal Black women who lived in these areas and were enrolled in the Black Women's Health Study, conducted from 1995 through 2019.

Findings showed that during the inquiry's 14-year follow-up period, 6,238 (28.4%) of the women said they were diagnosed with uterine fibroids. Researchers also found that after adjusting for specific factors, such as body-mass index, smoking, pregnancies and education level the number of women who reported having fibroids escalated along with the amount of ozone in the air.

Scientists noted a 35% higher risk for fibroids among women subjected to larger amounts of ozone compared with those in environments with less of this pollutant.

"We are still trying to figure out what specific exposures explain this disparity," said Amelia Wesselink, PhD, assistant professor in the department of epidemiology at Boston University's School of Public Health and the study's lead study author. "Possible explanations that are under investigation include stress throughout life due to systematic oppression and racism; vitamin D deficiency; and environmental factors, like air pollution, which we know are inequitably distributed across populations in the United States."

Researchers stressed that more research and money are required to learn how air pollution contributes to uterine fibroids. Investigations would focus on pinpointing fibroids that trigger problematic symptoms as well as those that don’t prompt women to see a doctor. In addition, scientists would assess how environmental factors, such as noise and accessibility to green areas, affect fibroid development.

To learn more about uterine fibroids and resources for relief, see “Understanding Your Treatment Options for Uterine Fibroids.”
