

Diabetes and the Environment

The Issue and Action Steps for Community Members

What is diabetes?

Diabetes is a condition that happens when your blood sugar (glucose) is too high. It develops when your pancreas either doesn't make any insulin at all (Type 1), or when the pancreas cannot make enough insulin to compensate for your body not responding to the effects of insulin properly (Type 2). Diabetes affects people of all ages. Most forms of diabetes are chronic (lifelong), and all forms are manageable with medications or lifestyle changes.¹



How is diabetes related to the environment?

The risk of diabetes is impacted by many factors that include exposure to environmental chemicals via breathing (air pollution), eating, drinking, and absorption via skin.^{2,3} Wayne County and the City of Detroit both have a greater number of residents with diabetes compared to the state average.²⁻⁵

How does exposure to air pollution increase my risk of diabetes?

Researchers have found that air pollution can lead to stress in the body, causing inflammation. This may increase the risk of diabetes.¹⁸⁻²³ One harmful type of air pollution, called PM_{2.5}, mostly comes from burning fossil fuels.¹⁸⁻²³ In Michigan, PM_{2.5} levels are high, especially in the Detroit area, due to industry and heavy traffic.¹⁸⁻²³

How does food availability impact the risk of diabetes?

Eating a variety of healthy foods such as fruits, vegetables, beans, and nuts can help people prevent and manage Type 2 diabetes and reduce stress in the body.²⁴⁻²⁷ People who eat more fruit may also be less affected by air pollution. But getting healthy food is not always easy.²⁴⁻²⁷



In Detroit, more than 20% of neighborhoods do not have reliable access to enough healthy food.²⁴⁻²⁷ People in Detroit experience nearly half of the food access issues in Michigan.²⁴⁻²⁷ Without enough nutritious food, it is harder to manage diabetes and protect the body from the harmful effects of pollution.²⁴⁻²⁷



How does chemical exposure increase the risk of diabetes?

Endocrine disrupting chemicals (EDCs) are chemicals or mixtures of chemicals that disrupt (interfere) with the way the body's hormones work.⁷⁻¹⁰ They are released into the environment through industrial activity and food production.⁷⁻¹⁰ They can also be found in many household products.⁷⁻¹⁰

EDCs that are most commonly linked to diabetes include:

Protect yourself and your community:



Scan this QR code or go to <http://bit.ly/4mp422w>

BPA

BPA is a chemical found in some plastic containers and food can linings.¹¹ It can affect blood sugar control and may increase the risk of diabetes.¹¹



Dioxins

Dioxins are harmful chemicals that stay in the environment for a long time.¹²⁻¹⁴ They get into the air when factories or waste are burned.¹²⁻¹⁴ Studies have linked dioxin exposure to a higher risk of Type II diabetes.¹²⁻¹⁴

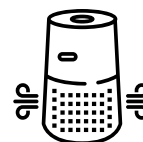
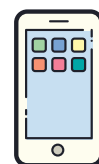
Phthalates

Phthalates are chemicals used to make plastic flexible.¹⁵⁻¹⁷ They're found in products like cosmetics and soaps.¹⁵⁻¹⁷ Studies show they may be linked to diabetes and insulin resistance.¹⁵⁻¹⁷



How can I support my community?

- Ask your state and federal representatives to:
 - Ban harmful EDCs in products and limit their release into the environment (e.g., restrict BPA and phthalates in packaging and plastics).
 - Strengthen clean air laws to reduce fossil fuel pollution near homes and schools.
- Check out EWG's website, linked in the QR code above, to make sure the products you're using are free of chemicals that are harmful to your health
- Support the use of air purifiers in schools, childcare centers, and low-income housing
- Expand food access programs that bring fresh, antioxidant-rich foods to SE Michigan communities.
 - Increase funding for local farmers markets, Fresh Rx through the Community Health and Social Services (CHASS) Center, and urban farming initiatives in neighborhoods with limited grocery options.



Please see http://mleed.umich.edu/Coec_Fact_Sheets.php for the citations included in this factsheet.

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