

## Podcast: Addressing Environmental Health Disparities through Research

**Narrator:** We often hear the terms “health disparities” or “environmental health disparities” but not everyone knows what these terms mean. Since they are complex, we wanted to sit down with someone who could describe what these terms mean and how the National Institute of Environmental Health Sciences, NIEHS, is working to address them.

Dr. Symma Finn is the Program Director for the Centers of Excellence for Health Disparities Research that are jointly funded by the National Institutes of Health and the U.S. Environmental Protection Agency.

Dr. Finn notes that some groups of people in the United States experience higher rates of certain diseases, and more deaths because of these diseases, than the general population. For example, communities near highways, which are more likely to be lower income or include people of color, may be exposed to more traffic-related air pollution and have a higher risk of respiratory disease. These differences in health outcomes between groups are called health disparities.

The factors that contribute to health disparities and the populations they affect can be incredibly complex. Dr. Finn says that differences in environmental risk factors, such as lifelong exposure to a range of pollutants in the places where we live, work, and play, can contribute to or worsen health disparities.

**Finn:** Environmental risk factors include contaminated water, indoor and outdoor air pollution, resource extraction, household products, occupations, disaster events, and extreme weather.

**Narrator:** In addition to environmental factors, differences in social factors can also contribute to health disparities. These factors, which include where people live, and their ability to access resources such as healthy foods, are called social determinants of health.

**Finn:** Social determinants of health include socio-economic status; the built environment, which includes issues such as walkability, density, noise, food deserts; and, in urban environments, lead in homes and soils; race, racism and ethnicity; immigrant status, including acculturation and language use; and access to healthcare.

**Narrator:** While environmental risk factors and social determinants of health can each contribute to health disparities, Dr. Finn says that it can be particularly harmful when they are combined.

**Finn:** We know that most people are exposed to environmental risk factors, but these risks are increased when people are exposed to combinations of many different chemicals throughout the lifespan, that then interact with social determinants of health. This is primarily among lower socio-economic status communities.

**Narrator:** Dr. Finn notes that low-income communities and people of color are often situated in cities where the built environment reduces access to green spaces and to fresh foods. In addition, major roadways run through urban centers, which can impact both indoor and outdoor air quality. Such combinations place these vulnerable communities at higher, or disproportionate, risk for adverse health outcomes.

NIEHS works with grantees and their community partners to address environmental health disparities and to improve human health and wellness through different programs and initiatives.

**Finn:** NIEHS has several dedicated programs that focus on translational science, that examines and characterizes these multiple and lifelong exposures and then translates those findings into public health actions. Key among those programs is the Environmental Health Disparities Centers which we co-fund with our sister institute, National Institute of Minority Health and Health Disparities, and EPA.

**Narrator:** These centers prioritize community engaged research approaches, which Dr. Finn says are vital to understanding and reducing environmental health disparities. By working directly with impacted communities, researchers can benefit from the local knowledge of their community partners, and are better equipped to translate research to action. These partnerships also increase the community members' understanding of connections between their environment and their health.

**Finn:** We really believe that the best environmental health disparities research is deeply community-engaged. Scientists want to answer scientific questions about exposures; communities push scientists to answer questions in a way that leads to solutions for their exposures and their health concerns.

**Narrator:** Dr. Finn says that one key challenge in addressing health disparities is moving from focusing on individual behavior changes towards changes at the community, regional, or national level that will reduce the impact of the many factors contributing to health disparities.

NIEHS grantees are partnering with impacted communities to inform this kind of large-scale collective change, which Dr. Finn stresses as critically important. She says that environmental health disparities research is about understanding the reasons some people are disproportionately exposed to environmental conditions that can harm their health, and that environmental justice is the action of addressing those inequalities.

**Finn:** It's the community members who raise the issues of environmental justice and ultimately are the ones who are suffering from environmental injustice. And so by involving them more deeply in the research, they have the information and the data, and, hopefully, the tools to promote justice within their communities, well beyond what a research study is intended to do. So, we're trying to give community members tools so that they can take both scientific findings and their own need for justice and act on it on their own.

**Narrator:** Dr. Finn says another benefit of community-engaged research is that it can get youth actively involved and help stimulate their interest in science, technology, engineering, and math. Involving youth also promotes sustainability in these projects, encouraging involvement from future generations.

**Finn:** Our leadership has fully embraced the public health implications of environmental health science research. And, so, I and my colleagues are proud to work here because we do believe that we are making effective use of science to address societal issues of incredible importance. We are proud to work for an institute that has fully embraced the notion of addressing environmental health disparities and environmental inequities.

**Narrator:** Thanks to today's guest, Dr. Symma Finn, for joining us. You can learn more about environmental health disparities and the work NIEHS is doing to address it by visiting our website at [niehs.nih.gov/podcasts](https://niehs.nih.gov/podcasts).

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