

Coal pollution and disease linked in new WVU study

By Scott Finn

Studio lead: Living in a coal-mining community may be hazardous to your health. That's according to a new study by a WVU researcher to be published in the April issue of the American Journal of Public Health.

Researcher Michael Hendryx found higher rates of kidney and lung disease and high blood pressure in West Virginia's coal-producing counties. He says this is true even when you take into account differences in income and lifestyle. Scott Finn reports.

Finn: Hendryx compared the self-reported rate of disease in coal mining counties of West Virginia to counties with no coal mining. He controlled for lifestyle differences, such as smoking rates, and other factors like income.

He found that people in coal mining communities have a 70 percent increased risk for developing kidney disease, a 64 percent increased risk for developing chronic obstructive pulmonary disease, such as emphysema, and are 30 percent more likely to report high blood pressure.

Hendryx didn't just crunch the numbers for his study. He visited coalfield communities himself.

Hendryx: Oh, you can go to a town where there's a large coal processing facility, and you can meet with someone who will take you into their backyard and they will wipe the coal dust off their lawn furniture, and you can go back a month later and they'll do it again.

I went to one town where I witnessed an explosion from the mountaintop removal site and watched the dust settle over the neighborhood. When you see things like that, you know you're dealing with something real.

Finn: He says he can't prove that coal pollution is the culprit, but that's his leading theory right now.

Hendryx: The pattern I see was pretty much the same, it was present for chronic forms of heart disease, kidney disease and lung disease. And there's good evidence from other research that links exposure to air pollution and exposure to specific toxic elements found in coal to these same diseases. (:26)

Finn: There's one more piece of evidence that pollution is to blame – when he looked at diseases that haven't been linked to coal pollution, such as diabetes, he found the rates were the same for coal and non-coal counties.

Hendryx: And it's not present for other kinds of problems that are related to behavior. Like diabetes for example. It's not present for diabetes when you control for other factors, indicating to me that higher rates of diabetes in coal mining areas are because of these lifestyle issues. But even after you adjust for those factors, it is still present for lung cancer, for chronic lung disease, heart disease and kidney disease. So I do think the environmental quality problems are part of that picture, and we can't ignore it anymore.

Finn: He says the rates of diseases were higher for both men and women. Since most coal miners are men, he says this tells him the entire coal mining community is affected – not just coal miners themselves.

Hendryx: And I think those problems are elevated in women just as well as men. I don't think it's just occupational exposure.

Finn: Hendryx believes this is the first study of its kind in the United States. Next, he plans to return to the coalfield and take air and water samples to determine whether pollution is worse there.

He says the stakes can be life and death. In an earlier study, he compared the death rates between coal and non-coal counties. Again, controlling for income and lifestyle differences, he estimates that coal pollution kills 313 West Virginians every year.

The coal counties in the study mined more than 4 million tons of coal in 2001 and include Boone, Clay, Harrison, Kanawha, Logan, McDowell, Marshall, Mingo, Monongalia, Nicholas, Raleigh, Wayne, Webster, and Wyoming counties.

For West Virginia Public Broadcasting, I'm Scott Finn in Charleston.