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Annotation #4

Basu, Niladri, Dong-Ha Nam, Edward Kwansaa-Ansah, Elisha P. Renne, Jerome O. Nriagu
2011 Multiple Metals Exposure in a Small-Scale Artisanal Gold Mining Community.
Environmental Research, (111), 463-467. Retrieved February 10, 2015.

The objective of this article was to relate the findings of a study conducted to characterize exposures to several elements (aluminum, arsenic, cadmium, cobalt, chromium, copper, manganese, nickel, lead, selenium, zinc) in the urine of 57 male residents of a small-scale gold mining community. The authors/research conducted previous studies with the same community regarding exposure to toxic levels of mercury, but wanted to see if there was a difference in exposure to other trace elements associated with gold mining for mining and non-mining residents.

The researchers surveyed residents about occupation, diet, health, and lifestyle. They chose to only focus on males to minimize gender differences. Then they tabulated descriptive statistics for all measurements and analyzed the data for associations between urinary levels of elements with participants' occupation, mining site, and fish consumption. They also analyzed associations between metals using factor analysis with a p-value lower than 0.05 considered significant.

The researchers found no association between urinary elements and participant's age, number of years worked, education level, frequency of fish consumption, or mining site and no significant differences in urinary element concentrations across the occupational groups.

This article was the most data driven and analytically sound of those read thus far.