

Environmental Justice, Air Pollution, and Health



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Air Resources Board



California Environmental Protection Agency

Environmental Justice Background

- Environmental Justice: Fair treatment of all people in development of regulations and policies
- Poor and minorities disproportionately exposed
- Do environmental justice communities experience unequal health outcomes?



Demographics and Birth Outcomes

- Increased risk of pre-term births in disadvantaged neighborhoods with high traffic density¹
- Decreased birth weight associated with PM2.5 exposures²
 - Greater effect for African Americans



¹Ponce NE, KJ Hoggart, M Wilhelm, B Ritz, 2005. Am J Epidemiol, 162:140-148.
Funded by: National Institute of Environmental Health Sciences

²Bell ML, K Ebisu, K Belanger, 2007. EHP, V115: 1118-1124.
Funded by: Health Effects Institute, National Institute of Environmental Health Sciences

Respiratory Risk and School Performance in Los Angeles

- Lower academic performance for schools located in census tracts with higher respiratory risk
 - Schools with the highest proportion of Latino and African American students had the highest respiratory risk
- Results persist even after controlling for factors that traditionally influence educational achievement



ARB Environmental Justice Research

- Pollution exposure near ports and rail yards
- West Oakland risk assessment
- Evaluations of asthmatic children
 - East Bay Children's Respiratory Health Study
 - Los Angeles Family and Neighborhood Survey
 - Fresno Asthmatic Children's Environment Study



ARB Environmental Justice Research (continued)

- California birth outcomes
- Oakland self-assessment
- Environmental justice screening tool
- Environmental justice impacts of global climate change in California



Conclusions and Implications

- Disparities in environmental exposures remain
- Continued need to include environmental justice in developing regulations and policies
- ARB continues vulnerable populations research

