

## **Environmental Epidemiology in the Context of Translational Science: Lessons from Studies of Air Pollution and Cardiovascular Diseases**

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“Translational science” is typically conceived in the context of medical sciences: a bridge between basic research discoveries and clinical practice. The archetypal application is pharmaceutical development. This “bench-to-bedside” emphasis now prevails with funding agencies and academic institutions. The concept of translational science can be difficult to apply but is also important in the environmental health arena; instead of influencing treatment, the goals are beneficial interventions and relevant policymaking in the interest of improving public health. Environmental epidemiologists are well-placed to straddle the research-to-practice bridge, free of challenges facing most environmental health “bench” scientists—by avoiding the need to adjust results from animal models to humans and by directly examining exposure concentrations in relevant ranges—but challenges persist. Research over the past twenty years concerning the association between air pollution and cardiovascular disease provides a useful lens to consider the incorporation of translational science concepts into the framework of environmental epidemiology.