

Impact of **Pre- and Post-natal** Lead Exposure on Sexual Maturation

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Abstract

The theme of this research project is the potential impact of pre- and post-natal lead exposure on sexual maturation among Mexican boys and girls, ages 8 to 16 yr. The main objective of the pilot study is to validate children's self-report of stages in sexual maturation by comparison with physician assessment on physical exam

Lead exposure has been implicated as a possible contributing factor to delayed puberty among boys and girls in both human and animal studies. However, this has been understudied among humans and few reports have utilized longitudinal data. Conducting this pilot study will address gaps in the literature and further our understanding of the detrimental impacts of lead exposure on sexual maturation.

Taking advantage of a long-running birth cohort study in Mexico City that used a novel technique to measure a biomarker of prenatal lead exposure (maternal bone lead levels), we propose to conduct a pilot study to better understand the potential impact of pre- and post-natal lead exposure on subsequent sexual maturation.

The results of this pilot study will serve as a validation paper to be published as part of my doctoral work. I plan on communicating these results at the annual meeting of the International Society for Environmental Epidemiology (ISEE). This pilot project is the major component of my thesis. This work will lay the foundation, providing pilot data and methods development, for an R01 grant to be written by Dr. Karen Peterson who recently joined the department of Environmental Health Sciences as Professor and Director of the Human Nutrition Program.