

Abstract for Undergraduate Research Symposium Spring 2023

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Paper Title - “A Worldwide Review of Studies Examining Toxic Metal Structures Linked to Preeclampsia”

Preeclampsia is a strikingly common health complication for women who are pregnant or postpartum. Because of its commonality, preeclampsia is one of the leading causes of maternal mortality in the United States and beyond. The objective of this paper was to conduct a worldwide review of studies linking preeclampsia onset with exposure to toxic metal structures such as lead and cadmium. Seventeen studies were selected based on previously specified search criterion. The compiled evidence suggests that lead and cadmium are the two main toxic metal structures that are related to preeclamptic symptoms. The strongest evidence from twelve of the seventeen studies, shows a prominent link between maternal lead levels and preeclamptic symptoms. Four of the seven recognized continents are covered in this paper with eight individual studies from Asia, five from North America, two from Europe, two from Africa, and none from Oceania and South America. Through this initial investigation, it is evident that further research should be conducted to supplement the lack of information from the continents of South America and Oceania. In summation, this review highlights the necessity for further worldwide study into the linkage between toxic metal structures and preeclampsia.