



Delegate Marc Korman, Chairman  
House Environment & Transportation Committee  
250 Taylor Office Building  
Annapolis, MD 21401

Re: HB 1067 - Hunting - Phase-Out of Lead Ammunition - FAVORABLE

Dear Chairman Korman and Vice Chair Guyton:

Thank you for inviting me to participate in today's hearing and for your attention to a topic that is of significance not only to residents of Maryland, but to the nation.

My name is Aisha S. Dickerson. I am an Associate Professor of Epidemiology and have spent over 6 years at the Johns Hopkins Bloomberg School of Public Health, where I am Director of the Environmental Epidemiology track and lead several studies on the hazardous impacts of toxic metals, including lead. Before joining Hopkins, I completed one year of postdoctoral training in human health risk assessment at the U.S. Environmental Protection Agency and three years of postdoctoral training in environmental epidemiology at the Harvard T.H. Chan School of Public Health. I hold a PhD in Epidemiology from the University of Texas Health Science Center at Houston and an MSPH in Epidemiology and BS in Biology from the University of Alabama at Birmingham. I would like to state for the record that the opinions expressed herein are my own and do not necessarily reflect the views or positions of Johns Hopkins University, the Johns Hopkins Bloomberg School of Public Health or the Johns Hopkins Health System.

In my research, I have seen the detrimental health impacts of toxic lead exposures with respect to neurodevelopment and neurodegeneration.<sup>1,2</sup> Lead is a well-known toxicant that can cause a number of adverse health outcomes throughout life, including cognitive impairment,<sup>3-5</sup> mental health symptoms,<sup>6</sup> kidney damage,<sup>7</sup> cardiovascular disease,<sup>8</sup> and earlier age of death.<sup>9,10</sup> Lead not only produces health impacts after short, acute exposures, but can accumulate in bone over the lifetime.<sup>11</sup> These lead deposits can be released into the blood stream as bone metabolizes during pregnancy and lactation,<sup>12</sup> exposing unborn children and infants during critical periods of development. Furthermore, these same bone deposits can metabolize as bones age, increasing the risk of cognitive decline in older adults.<sup>13,14</sup>

My colleagues have demonstrated via animal studies that carnivorous wildlife that consume carcasses of animals killed with lead-based ammunition have higher blood and bone lead concentrations.<sup>15,16</sup> Similar to the issues with bone density and nervous function seen in these animals, humans who consume game meat are at a higher risk of fragile bones and neurologic issues. As a native Alabamian raised in a family of hunters, I am keenly aware of the amount of game meat, particularly venison, that is consumed by hunting families. I only became aware of the composition of the ammunition, the distribution of lead fragments in the carcass, and the risks of consuming contaminated meat during my postdoctoral studies, and I have been successful in encouraging my family to consider alternatives. Thus, I am confident that implementing the proposed bill will be feasible.

While policymakers have acknowledged the risk of lead ingestion from leaded paint and contaminated drinking water from municipal piping, many of these now notable hazards evaded recognition until there was a documented population-level crisis such as elevated blood lead levels of children in Flint, MI.<sup>17</sup>

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However, these mass public health catastrophes can be avoided through implementing barriers to hazardous lead exposures in advance of a crisis. I am pleased that Maryland is taking a step to address the risk imposed on residents, particularly children, by lead ammunition. Removing this source of a notoriously dangerous toxicant will ensure the health and longevity of hunting families and those who acquire game meats from local food banks. I urge the committee to provide a favorable report for Maryland House Bill 1067 to phase out the use of lead ammunition for all game and hunting activities. Thank you for the opportunity to testify, and I would be pleased to answer any questions you may have.

Sincerely,

A handwritten signature in black ink that reads "Aisha S. Dickerson". The signature is written in a cursive, flowing style.

Aisha S. Dickerson, PhD  
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Environmental Epidemiology Director  
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## References

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