Humane World for Animals.

Formerly called the Humane Society of the United States and Humane Society International

Testimony in Support of LD 1364
Resolve, Authorizing a Study on the Impacts and Risks of Lead-based Ammunition
Committee on Inland Fisheries and Wildlife
April 9, 2025

Senator Baldacci, Representative Roberts, and Members of the Committee on Inland Fisheries and Wildlife:

On behalf of our Maine supporters, Humane World for Animals, formerly called the Humane Society of the United States, offers its support for LD 1364 to authorize a study on the impacts and risks of lead-based ammunition for the following reasons:

1. Lead is highly toxic to humans

Lead is a toxic substance.[1] Lead poisoning has been documented in humans for more than 2,500 years,[2] and its harmful effects on human health are widely known. The Centers for Disease Control states that no level of lead exposure is safe for humans.[3] That is why lead has been removed from various paints, gasoline, pipes and a host of other products over the years. Yet lead exposure through hunting ammunition and tackle continues to pose a threat to human health. Top researchers, medical professionals, and environmental scientists state that lead-based ammunition is the "greatest, largely unregulated source of lead knowingly discharged into the environment in the United States."[4]

Although the effects of lead exposure are potentially concerning for all humans, young children are most at risk. Lead's negative impacts on children can include irreversible damage to the brain and nervous system, behavioral problems, anemia, liver and kidney damage, hearing loss, hyperactivity, developmental delays and, in extreme cases, death.[5]

Consuming meat from animals killed with lead ammunition needlessly puts people at risk of lead exposure.[6] Lead ammunition is highly fragmentable and nearly impossible to remove completely from meat.[7] Lead fragments can be found as far as 18 inches from the bullet wound channel.[8] Lead fragments in game meat include not only larger, visible pieces, but also nanoparticles invisible to the naked eye.[9] It is for these reasons that game meat, a common dietary staple for many families throughout the United States, can substantially raise lead levels in humans.[10,11] It is therefore advised that people not eat wild animals shot with lead ammunition in order to avoid possible lead exposure. For the safety of families in need, game meat donated to charitable organizations should not be shot with lead ammunition and should not be processed in facilities that may have lead contamination from other wild-killed animals.[12]

Some states recognize the threat posed by lead-contaminated game meat. North Dakota advises food pantries not to distribute or use donated ground venison due to contamination from lead fragments.[13] The Minnesota Department of Health recommends that pregnant women and children younger than six not eat venison harvested with lead ammunition.[14] Others advise the use of non-lead ammunition to prevent lead exposure from processed venison.[15]

2. Lead is highly toxic to wildlife

More than 130 species of wild animals have been documented as suffering the effects of lead poisoning from spent lead ammunition and fishing tackle. Animals are exposed to lead in various ways, including foraging spent lead shot from the ground, feeding on lead-tainted gut piles, scavenging carcasses of animals shot with lead ammunition and left behind, or directly consuming spent fishing tackle.[16]

Lead poisoning is one of the leading causes of death for bald eagles. Scientists have known for decades that bald eagles can be poisoned by exposure to lead, that poisoned birds ingest lead ammunition fragments, and that lead exposure in bald eagles is associated with hunting seasons when they are more likely to scavenge on lead-tainted gut piles left behind by hunters or the carcasses of animals that hunters shoot but don't recover. The toxicological effects of lead on bald eagles and other scavening birds are grave and well-established.[17] In birds, a single ingested shotgun pellet or bullet fragment is sufficient to cause brain damage, impairing critical neuromuscular, auditory, and visual responses.[18] Poisoned animals who survive often experience long-term negative effects that make them more susceptible to predation and dangers such as car collisions.[19]

A recent study found that nearly half of eagles tested in the U.S.—46% of bald and 47% of golden eagles—showed signs of chronic lead poisoning.[20] In 2020 the U.S. Fish and Wildlife Service (FWS) estimated a total population of 316,700 bald eagles in the U.S.,[21] so lead poisoning could be jeopardizing as many as 145,683 bald eagles. The FWS also notes that lead poisoning from spent ammunition is the primary cause of death for the California condor, a species the Service estimates numbers only 347 individuals in the wild.[22]

Other research finds that lead exposure increases in female black bears with the number of big game animals hunted by humans in the vicinity, and increases with age in both female and male black bears.[23] Scavenging carcasses of moose killed by human hunters likely also exposes black bears, brown bears, ravens, golden eagles and bald eagles to lead.[24]

3. Effective alternatives to lead ammunition are available

The availability,[25] performance and affordability of non-lead ammunition have never been greater than today. For example, FWS has approved more than a dozen nontoxic shot types for hunting waterfowl. The increased supply has led the price of non-lead shot to fall since lead shot was banned federally for waterfowl hunting in 1991. California's landmark decision in 2013 to become the first state to require non-lead ammunition for taking of any wildlife in the state also spurred the production and availability of non-lead bullets.[26] A survey conducted by the Arizona Game and Fish Department revealed that nearly 80% of hunters rated the performance of non-toxic ammunition to be better than or equivalent to its lead counterpart.[27] And the Texas Parks and Wildlife Department released a multi-year, peer-reviewed study in 2015 concluding that dove hunters using shotshells loaded with lead pellets achieved no advantage in effectiveness over those using shotshells firing non-toxic steel pellets of similar or slightly larger size.[28]

4. Conclusion

Because of the broad health risks that lead poses to people and animals, and the efficacy and availability of non-lead shot and tackle for hunters and anglers nationwide, Humane World for Animals ask you to vote ought to pass on LD 1364 to study its effects in Maine.

Thank you for your consideration of this important issue.

Sincerely,

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Maine State Director
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