Lead Poisoning: A Silent Epidemic

By Tori Burnett

Picture the Bald Eagle, our national bird, and a symbol of power, majesty, and awe. Now picture that same bird lying on the ground, paralyzed and poisoned, unable to do anything but wait for its life to slowly ebb away. As shocking as this scene is, the sad truth is that thousands more birds and mammals will die in this way every year. The culprit is lead poisoning, a little known and overlooked disease that deserves much more attention than it gets.

Lead poisoning is caused when lead contaminates the bloodstream. Ingesting pieces of lead or pieces of lead contaminated meat is usually how animals contract lead poisoning. After being digested and broken down, the lead is absorbed into the bloodstream and stored in tissues and bones throughout the body. Small amounts of lead can be survivable, but as the amounts grow larger, the problems grow more serious. Paralysis, blindness, lethargy, loss of appetite, infertility, brain damage and death are just a few of the problems lead poisoning can cause. Both birds and mammals, including humans, can be affected by lead poisoning, although birds are known to suffer most critically. Birds of prey are especially susceptible to lead poisoning because of a process called bioaccumulation, in which lead becomes more concentrated as it moves up the food chain. (HawkWatch International) Raptors, being toward the top of the food chain, are therefore affected by higher and more damaging concentrations of lead.

Lead is not a naturally occurring problem; humans cause it. Hunting and fishing are the largest contributors to the lead problem. Both lead shot and lead sinkers can be carelessly left out in the open or embedded in a carcass for unsuspecting animals to eat. Waterfowl and upland game birds eat gravel to aid in digestion, and cannot tell the difference between gravel and lead pellets or sinkers. (Minnesota Pollution Control Agency) Likewise, lead poisoning can cause animals to become weakened and sluggish, making them appealing and easy targets for predators, who will then also become poisoned. In waterfowl, just one lead pellet consumed can result in anemia, while five or more pellets can result in death due to heart attack or muscle paralysis. (Michigan Department of Natural Resources)

Although no cases of lead poisoning in humans from lead contaminated meat have been documented thus far, humans still have just as much potential to be harmed by lead shot as wildlife does. Recent studies have shown that consumption of lead contaminated meat by humans resulted in higher blood lead levels. (Kosnett) What happens to them can happen to us.

Lead poisoning has been documented as far back as the 1800's and is still going strong today. (Michigan Department of Natural Resources) Between 1980 and 1996, the University of Minnesota's raptor rehabilitation center reported lead poisoning in 138 of 650 eagles treated by the center. Since 1996, an average of 25% of the Bald Eagles admitted to the raptor center each year have been reported to have toxic levels of lead in their blood. (University of Minnesota Raptor Center) These numbers are particularly noticeable in popular hunting areas, such as my home state of Oregon. Blue Mountain

Wildlife, a small, local, wildlife rehabilitation center, has recorded a large influx of lead poisoned eagles in the past two years. In 2007, about 6 out of 8 of the eagles admitted had lead levels high enough to warrant treatment. Many of these eagles were young, first-year birds, indicating that parent birds must be finding lead contaminated meat and bringing it back to their young. These numbers, although not staggeringly huge, still indicate that lead poisoning has been, and continues to be, a significant problem.

In 1991, the United States Fish and Wildlife Service placed a federal ban on the use of lead shot for waterfowl hunting. (U. S. Fish and Wildlife Service) Maine, New Hampshire, New York, Vermont, and Massachusetts have also stepped up and established statewide bans on the sales/use of lead sinkers and jigs. (Minnesota Pollution Control Agency) While these laws have had a great amount of success in lowering the amount of lead poisoning in waterfowl, birds of prey still continue to be adversely affected by lead, particularly Bald and Golden eagles. As waterfowl only makes up part of the diet of both these birds, there are still several other ways for them to contract lead poisoning. Golden Eagles also eat Ground Squirrels and Jackrabbits, and both Bald and Golden Eagles eat upland game birds. In Plinking, a type of hunting in which smaller animals such as squirrels or rabbits are killed, hunters often shoot several animals in a day, leaving the carcasses out in the open. Up to 30 Golden Eagles have been spotted following Plinkers from field to field, scavenging on their leftovers. (Sanborn) Since there are no lead regulations for Plinking, there is a chance that every one of those carcasses could be contaminated with lead. Bald and Golden Eagles

have also been known to feed on carrion, including big game animals such as deer or elk. Lead slugs used in big game hunting have been known to be a source of lead poisoning for scavenging birds, including the endangered California Condor. (University of Minnesota Raptor Center)

Despite laws already put in place to help the problem, lead poisoning will not be so easily defeated. The problem of lead in the environment could last for as long as it takes to decompose, potentially 100 to 300 years. (Sanborn) If just one lead pellet will take this long to truly leave the environment, then it is crucial that the use of lead is stopped completely and as soon as possible if lead poisoning is to be overcome. As with all solutions to such widespread problems, this won't be easy. But, there are a few simple, key steps that can be taken to bring us much closer to the goal of eliminating lead poisoning.

The first and most important step is education. One of the greatest roadblocks in the abolishment of lead has been under-education. Many people have never even heard of lead poisoning, let alone how it affects wildlife, and if they don't know that it's a problem, they can't help. Education will open the public's eyes to the problem of lead poisoning and let them know what they can do to help.

The second step to be taken is to expand on laws against the use of lead already established, and to create laws against the use of lead in other states, particularly where hunting and fishing are popular. The laws already made have proven to be very helpful in reducing lead poisoning in certain species and certain areas, but if lead poisoning is to be abolished completely, laws must be made that cover all species at risk in all areas.

The third and final step is to promote the use and sale of non-lead, hunting and fishing equipment. The defeat of lead poisoning is almost solely dependant on the cooperation of hunters and fishers. Several lead-free equipment alternatives, such as steel or tungsten are becoming more and more common. Some hunters argue that non-lead bullets aren't as affective as lead, but studies have shown that they usually have comparable or better ballistics, depending on size, manufacturer and type of metal. (Washington Department of Fish and Wildlife) Another excuse hunters and fishers often use to avoid giving up lead is the price of alternatives. Although once much more expensive than lead, non-lead hunting and fishing equipment has become more common and has been lowered to a more moderate price. New steel shot loads have recently been marketed for about $0.25 per shell, versus $0.20 a shell for lead, only a five-cent difference. (Washington Department of Fish and Wildlife) Both the first and third steps go hand in hand; educating people about these non-lead alternatives is essential to put a stop to the use of lead.

Wildlife, whether endangered or not, is precious. In today's modern world our wildlife is threatened in countless different ways. If even just one of these problems can be ameliorated, it would benefit our wild neighbors immensely. Lead poisoning is preventable. With regulations and more education, we have the potential to stop lead poisoning in its tracks, and allow wildlife like the majestic Bald Eagle to soar freely across the earth once more.

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