
LEAD, HEALTH AND THE ENVIRONMENT: OLD PROBLEM AND 21ST CENTURY CHALLENGE

Mark Pokras, Wildlife Clinic & Center for Conservation Medicine-Tufts University, Cummings School of Veterinary Medicine, mark.pokras@tufts.edu

Conservation medicine examines the linkages among the health of people, animals and the environment. Few issues illustrate this approach better than an examination of lead (Pb) toxicity. Lead is cheap and there is a long tradition of its use. However the toxic effects of Pb have also been recognized for many years and our knowledge of the lethal and sublethal effects of Pb continues to grow dramatically. As a result, western societies have eliminated or greatly reduced many traditional uses of Pb, including many paints, gasoline and solders because of threats to the health of humans and the environment. Legislation in several countries has eliminated the use of lead shot for hunting waterfowl. Despite these advances, a great many Pb products continue to be readily available. Wildlife and environmental agencies recognize that angling and shooting sports deposit thousands of tons of Pb into the environment each year. Given what we are learning about the many toxic effects of this heavy metal, there is every reason to switch to non-toxic alternatives. To accomplish this, a broad, ecological vision is important. This presentation will briefly review the current state of knowledge on the toxicity of lead and its behavior in the environment, including the effects on wildlife, humans, and domestic animals. We will also discuss why wildlife professionals need to take a leadership role in bringing together all interest groups to find safe alternatives, to develop new educational and policy initiatives, to eliminate many current uses of Pb, and to clean up existing problems.