

## Species Affected

According to the National Forest Service, “More than 500 scientific studies published since 1898 have documented that worldwide, 134 species of wildlife are negatively affected by lead ammunition.” Ravens, eagles, vultures, condors, hawks and bears are some of the wild animals that are most at risk. These animals come in contact with lead when hunters leave the remains of dead animals in the wild. Birds and other scavengers can ingest lead bullets from the animal remains, which can lead to lead poisoning. Lead is nonbiodegradable which means it builds up in the environment. Shooting ranges and wetlands are most affected by lead concentrations. Lead concentrations affect animals in these habitats.

## Cost

The price of non-lead bullets can be comparable, or cost slightly more than lead bullets. If you compare factory loaded lead core ammo with ammo loaded using a premium non-lead core the differences in cost are slim to none. However, if you compare soft point lead bullets with non-lead ammo, the prices may vary from 50-100% more for the non-lead options. The greater safety of non-lead bullets may come at a higher cost, but is a safer option for hunters.



## Laws and Regulations

Laws and regulations regarding the use of lead has been passed by Congress addressing lead in paint, soil, air, water, and waste. Some laws include the Toxic Substances Control Act, Residential Lead-Based Paint Hazard Reduction Act, Clean Water Act, and the Safe Drinking Water Act. To find the current laws for your area, refer to the Utah Division of Natural Resources.

## References:

National Forest Service: [www.nps.gov](http://www.nps.gov)

Hunting with non-lead:  
[www.huntingwithnonlead.org](http://www.huntingwithnonlead.org)

United States Environmental Protection Agency

Utah Department of Environmental Quality

Utah Division of Natural Resources

## Lead Poisoning



Lead is an inexpensive metal that has been used in everything from paint and toys to bullets for hundreds of years.

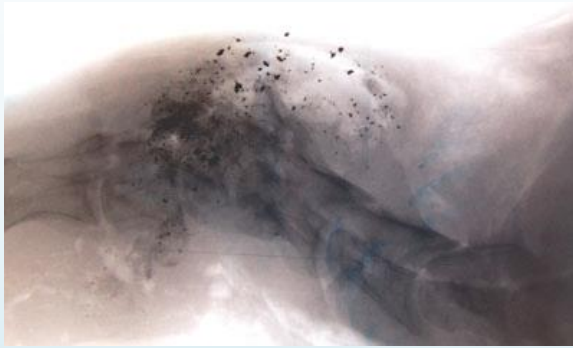
Due to its harmful effects on humans, it was banned from being used in paint in 1978. However, lead is still being used in bullets today, exposing both humans and wildlife to the lethal metal.



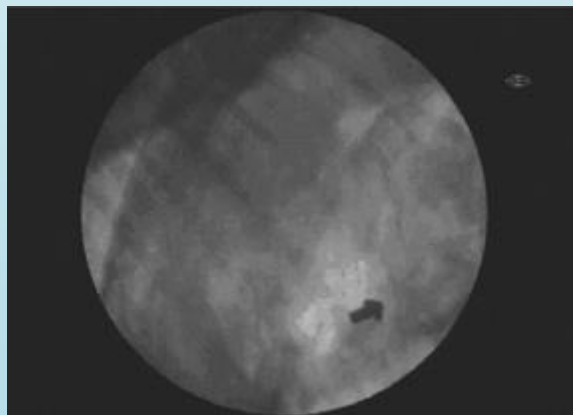
## Cost Continued

Due to the demand for non-lead bullets, manufacturers have increased their production of non-lead bullets, which has decreased the cost.

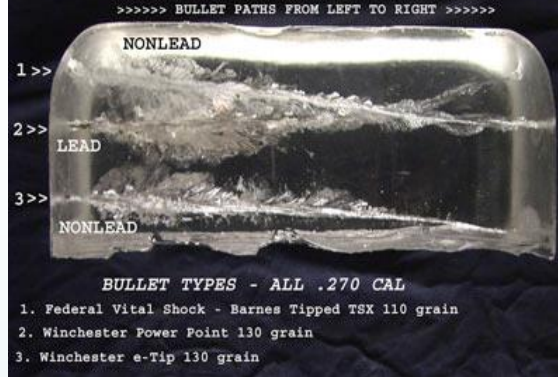
Many common manufacturers that now carry non-lead options include Hornady, Remington, Winchester, and Federal.



Above is an x-ray of a deer's neck that has been shot by a lead bullet. The dark spots are fragments of lead. Below is a copper bullet in a deer, which shows no fragments.



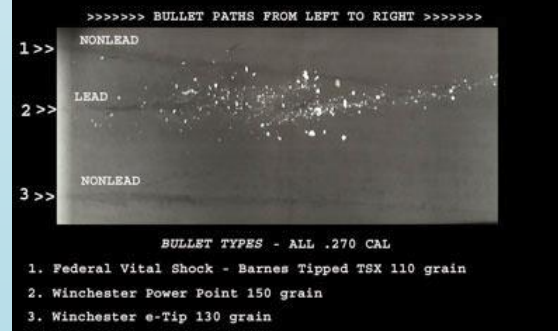
## PHOTO OF BALLISTIC GELATIN



Above is a Ballistic Gelatin with three shots fired into it. Number one and three are non-lead bullets, while number two is lead. The same ballistic was x-rayed below. The white fragments are pieces of lead from the lead bullet.

When a lead shot enters a body the bullet splits apart leaving a trail of lead fragments. If the bullet hits the bone, the lead fragments can spread even farther.

## X-RAY OF BALLISTIC GELATIN



## Health and Effects

A recent study conducted by the University of North Dakota investigated the amount of lead fragments in venison samples collected from 30 deer. Of the 342 samples, of both ground and whole cuts, 34% contained metal fragments some up to 168 separate pieces. Of the metal fragments found, 93% were lead while only 7% were copper. The contaminated samples were then fed to pigs, and within two days the pigs showed elevated levels of lead in their blood.

Lead is not used in the human body so when ingested it fuses with calcium and other essential nutrients necessary for the metabolic system. Children are more sensitive to lead levels due to their high rate of growth. Even low levels of lead can be very harmful to children, causing disease, unconsciousness or even death. In adults, lead can cause infertility, high blood pressure, digestive and nervous system problems, and memory and concentration issues.

