Terra Nova National Park

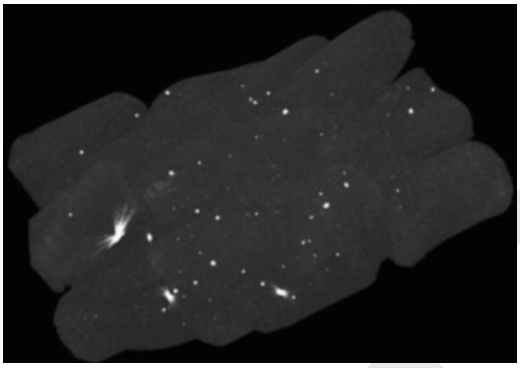
# Non-lead Ammunition: A Healthy Choice

Lead-based ammunition has been a mainstay with hunters for centuries. However, lead is a known toxin with negative consequences to human, animal, and environmental health. Newer, lead-free ammunition provides an effective alternative for hunting and reduces the contamination of wild game that ends up on our dinner tables.

A lead cored bullet before (inset) and after being shot. The lead core has separated and fragmented into hundreds of pieces.
(Photo: Clint Epps)

## How does lead get into meat?

Upon impact, lead-cored bullets fragment into many pieces, some of which are as small as a grain of salt. The typical lead-cored bullet loses 40% of its mass as it passes through an animal, and these fragments can scatter up to 15 centimeters from the wound channel.



A CT scan of 20 one-pound packages of ground game meat. Bright spots are lead fragments embedded in the meat.
(Photo: Cornatzer et al. 2009)

## On our dinner table

Small lead fragments often remain in game meat even after butchering. Lead is a toxin that can affect human health, which is why it has been removed from things like gasoline and paint. According to Health Canada, even very low levels may have harmful effects on human health. It can affect the nervous system and cognitive abilities. These concerns are especially relevant for children.

For more information on the effects of lead on humans visit Health Canada Website:

www.canada.ca/en/health-canada/

## In the environment

The same lead fragments that may end up on our dinner table also remain in gut piles—an "all you can eat buffet" for eagles, ravens, crows, jays, bears, foxes and Newfoundland marten. Studies have shown that these scavengers experience increased lead exposure during the hunting season.

At low levels, the toxic effects of lead can make it difficult for these animals to walk and fly which in turn can make it hard for them to escape predators, avoid vehicles, and can cause starvation. At high levels, lead poisoning kills.

Canada Jay foraging on a moose gut pile.
(Photo: Parks Canada)

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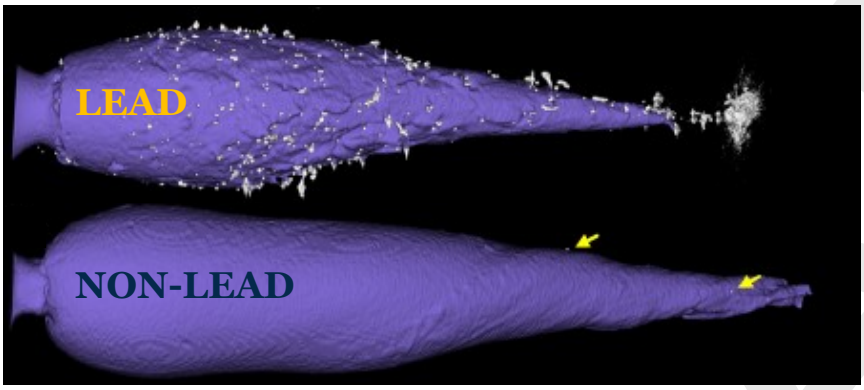
## A safer alternative

Solid copper, expanding nose bullets were developed as high performance ammunition for big game hunters. Because they remain intact and mushroom in a controlled fashion they have greater penetration and the wound channel remains on target. Most users indicate that solid copper bullets have excellent ballistics. The capacity of copper bullets to kill big game is similar, or superior to lead bullets.


Above: Unspent and spent bullets recovered from harvested moose. The lead bullet has lost most of its lead core whereas the solid copper bullet remained intact. (Photo: Parks Canada)




Left: Comparison of penetration cavities for lead versus non-lead bullets fired into ballistic gel. White specks in the upper image are lead fragments, while the yellow arrows in the lower image point to fragments of non-toxic copper. (Photo: Gremse et al. 2014)

## Frequently Asked Questions:

**Isn't lead ammunition already banned?** The use of lead shot was prohibited for hunting migratory birds in the 1990's. However, use of ammunition containing lead is still permitted for other types of hunting (e.g. big and small game including grouse and ptarmigan, as well as murres [turrs]).

**Is it legal to use copper bullets in Newfoundland?** Yes, solid copper expanding nose bullets are legal to use in Newfoundland. Note: This is not "service ammunition" which does not expand.

**Are copper bullets more expensive than regular lead bullets?** Copper bullets sell for about the same price as lead-cored bullets of similar quality.

**Where can I purchase non-lead ammunition?** Non-lead expanding nose rifle bullets and shotgun slugs and shot are available in all common calibres and are made by most brands. Check online or ask your local sporting goods store.

**Does Parks Canada require hunters to use non-lead ammunition for moose hunting?** No. However, we want to make hunters aware of alternatives that are safer for you, your family, and the environment.


**Consider trying solid copper bullets this season. It's safer for you and the environment!**