

Alternatives to Lead

A Better Approach: Use Non-lead Bullets



Hunters are continuing their proud tradition of wildlife conservation by using non-lead alternatives.

Eagles, condors, and other birds feed on carcasses and gutpiles. When those remains contain spent lead ammo remnants, wildlife eat the lead and die. Bullet and ammo manufacturers now offer numerous effective non-lead options for rifles and shotguns. Hunters are helping by using these alternatives.

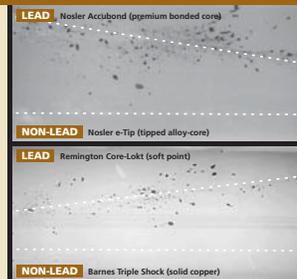
| LEAD BULLETS | NON-LEAD BULLETS | | | | | |
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| Lead-core Bullet | Solid Copper | Tipped Alloy-core | Frangible | Small Caliber | | |
| Lead-core bullets have a thin copper alloy jacket. They fragment on impact, spreading toxic lead throughout the wound channel. | The Barnes Triple Shock, loaded by Federal, Corbon, Weatherby, and others, is a 99.9% copper bullet. | | Alloy-core options include Hornady GMX, Remington Copper Solid, Nosler e-Tip, and Barnes MRX. | Barnes Varmint Grenade, Nosler Ballistic Tip, Hornady NTK, and DRT Terminal Shock fragment explosively. | Winchester, C&C, Nosler, Speer, Barnes, and Hornady make solid-core and frangible bullets. | |
| | <p>This photo shows the difference in fragmentation between lead and non-lead bullets (both .270 caliber). The lead bullet on the left shattered, losing 28% of its original weight to fragmentation.</p> | | <p>The non-lead bullet on the right mushroomed out and retained 98% of its original weight, resulting in greater penetration and more effective stopping power.</p> | | | |

Bullet Trial Comparisons

To compare fragmentation between two lead bullets and two non-lead alternatives, all were fired into ballistic gelatin at 50 yards. The gelatin blocks were then X-rayed.

Both bullet types expanded equally, but non-lead bullets showed little to no fragmentation. In comparison, lead bullets fragmented into hundreds of pieces. When striking bone and hide, fragmentation increases significantly. In game meat, these fragments are very difficult to remove during processing.

Dotted lines show the bullet's path from left to right.



Frequently Asked Questions

Do non-lead bullets expand as quickly as lead bullets?

Yes. The specially engineered nose cavity begins expanding as soon as it contacts hide and flesh. Tests in gelatin show comparable expansion between lead and non-lead bullets.

Are non-lead bullets as accurate as lead?

Yes. These bullets supply exceptional accuracy and terminal performance over a wide range of velocities. Try different brands and grain weights to see which shoots best in your rifle.

Do non-lead bullets often shoot through deer-sized game?

Yes. Rapid expansion results in impressive energy transfer in game, matching or exceeding lead bullet performance. Pass-through shots result in a very long and large wound channel.

Do non-lead bullets foul or wear out my barrel faster?

No. Today's non-lead bullets affect barrels in the same way that copper-jacketed lead bullets do. As with any bullet, proper firearm cleaning is essential.

This exhibit was adapted from an original design by Aplin Uno Exhibits.

www.huntingwithnonlead.org

