

Alternatives to Lead

A New Approach: Use Non-lead Bullets



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

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

Lead vs. Non-Lead Bullet Alternatives

L E A D



Lead-core Bullet

Lead-core bullets have a thin copper alloy jacket. They fragment on impact, spreading toxic lead throughout the wound channel.

N O N - L E A D



Solid Copper

Tipped Alloy-core

Frangible

Small Caliber

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 NTX, and DRT Terminal Shock fragment explosively.

Winchester, CCI, Nosler, Speer, Barnes, and Hornady make solid-core and frangible bullets.



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.

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.

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 left hundreds of fragments behind. 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 right to left.

LEAD Nosler Accubond (premium bonded core)

NON-LEAD Nosler e-Tip (tipped alloy-core)

LEAD Remington Core-Lokt (soft point)

NON-LEAD Barnes Triple Shock (solid copper)

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.

Will non-lead bullets shoot through deer-sized game?

Usually. However, rapid expansion results in impressive energy transfer in game, very similar to 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.

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.

www.huntingwithnonlead.org

