A comprehensive study of bear attacks in Alaska confirms that bear pepper spray is a better defense than firearms.

By Christine Paige

A WALL OF PROTECTION

It was a windy day in 1995. Frank Vitale and three friends were horsepacking along Tuchuck Ridge in the Whitefish Range of northwestern Montana.

Vitale, a longtime hunter, horsepacker, and outdoorsman, had spent his life exploring the region’s backcountry—home to the densest population of grizzlies in the Lower 48.

The group of four riders, five horses, and a cattle dog moved slowly along a narrow, steep ridgeline. Vitale, riding lead, suddenly saw a large dark hump in the trail 40 to 50 feet away. It was a grizzly—sound asleep, bedded down in the ridge saddle. Vitale realized he and the others couldn’t turn their horses and slip away without a lot of clatter and possible disaster. He quickly decided to dismount and snub the horses to some small Douglas firs on the uphill side of the trail.

“The wind, a crosswind, was in our favor,” says Vitale. “I yelled at the bear and woke it from its nap. It sprang up, and two cubs of the year popped up bawling. Just then the dog ran past us straight at the bear, and the horses started freaking out. The bear charged, the dog disappeared above us into the trees and circled around behind us with the bear after it. Now I think, ‘We’re really in for it, if we’re between the sow and her cubs.’"

The grizzly broke off chasing the dog and headed back to her cubs. “Then,” Vitale continues, “she came down on all fours and charged right for us.”

Fortunately one of the riders, who had run into a grizzly the week before, was carrying a canister of bear pepper spray, a product newly on the market. He passed it to Vitale, who aimed it at the fast-approaching sow. “At 15 or 20 yards I started spraying and just kept spraying,” he says. “The bear ran into the big cloud and it stopped her cold—she turned around and took off with the cubs.”

There was a little blowback of spray and the four men’s eyes stung and watered, but they were alive and unharmed. “I’m a lifelong hunter, and now I always have bear spray right there, real close,” Vitale says. “I don’t see a big deal to carrying it in a holster on your hip—it’s readily available and you can even shoot it from your hip if you have to. As a hunter I feel you have a responsibility not only to protect yourself but also to protect the bears.”

Since that incident nearly 20 years ago, bear spray has become increasingly popular among hikers, anglers, hunters, backpackers, outfitters, and others who venture into the backcountry. And as it did for Vitale and his friends, the powerful spray continues to save lives—of humans and bears. Recent research shows that bear spray is more effective than firearms at deterring attacks. Not that a well-aimed shot from a .44 handgun or large-caliber elk rifle can’t deter a charging bear. It can. But studies show that the odds of preventing injury to yourself are far greater when you spray a near-impenetrable cloud of eye-scalding, nose-burning, throat-closing mist that stops a bear in its tracks.

Bear encounters increasing

Across the Northern Rockies, both bear and human populations are on the rise, making bear encounters more frequent. Montana’s black bear population stands at roughly 13,000 animals. About 740 grizzly bears live in and around Yellowstone National Park, and another 1,000 or so reside in the Northern Continental Divide Ecosystem between the Canadian border and the Blackfoot River Valley.

According to Chris Servheen, grizzly bear recovery coordinator with the U.S. Fish and Wildlife Service, in 2011 alone there were 83 incidents in the Northern Rockies of grizzlies charging people—31 instances (37 percent) involved hunters and 29 (35 percent) involved hikers. Fourteen (17 percent) resulted in human injuries and two were fatal.

Hunters are especially at risk of an encounter. By stalking quietly, moving at dawn and dusk, traveling off-trail, hunting alone, bugling, cow-calling, using cover scents...
The researchers first examined records of every bear encounter in Alaska where people had used bear spray to defend themselves—72 cases in all, from 1985 to 2006, including black bears, brown bears, grizzlies, and polar bears. What they found showed that bear spray packed an enormous punch. It stopped undesirable behavior more than 90 percent of the time, and in only three cases were humans injured—all relatively minor injuries—when bear spray was used.

In 17 incidents, bear resumed threatening behavior after the first spraying, but repeated spraying finally deterred the bear so that the person could escape. In three instances, the bears were in full charge when the spray was triggered, and the animal’s momentum carried it through the fog. But the spray did dissuade the bear, leaving the victims with only minor lacerations and in no need of hospitalization. “I am almost shocked and amazed at the track record of bear spray,” says Herrero, author of the popular Bear Attacks: Their Causes and Avoidance.

Easy to miss

Smith and Herrero next studied the effectiveness of firearms in bear encounters. Looking at records of 269 attacks by all three bear species in Alaska that occurred during the late 1800s and 2009, they found that discharging a firearm stopped encounters in 84 percent of incidents for handgun users and 76 percent for long gun users. “That’s surprising because some believe that handguns have no place in bear safety,” Smith told the Salt Lake Tribune. “But they are much more maneuverable and can be carried more accessibly (than a rifle).”

Yet even though firearms can stop attacks, often it’s usually only after the bears have caused bodily harm. Smith and Herrero found that bears inflicted injuries on humans in 56 percent of the incidents involving firearms. In fact, there was no difference in the rate of bear-inflicted injuries between those who discharged their firearm and those who didn’t, whose outcome was a fatality, an injury, or no injury at all.

Firearms failed as a defense for a variety of reasons: jamming, an engaged safety, no round in the chamber, the inability of the shooter to reload, the bear being too close, or people stumbling and falling. “The most common reason found by the researchers was simply a lack of time to respond,” says Smith. “They’re trying to figure out the situation and get you to leave.”

Firing a warning shot may not scare off a bear, because many bears don’t associate a loud gunshot with danger to themselves. But a nose full of bear spray is a strong deterrent. The active ingredient, capsaicin, sends an explosion of irritant that overwhelms a bear’s nasal membranes and hotwires its brain from flight to fight. The spray also creates an entire wall of defense—a near-impenetrable cloud the size of an SUV.

In addition to a far better record for human safety, another advantage of bear spray is that it leaves bears alive and healthy. Smith and Herrero found that bears died 61 percent of the time when people used firearms. Many of the encounters involved females, cubs, and a dead sow meaning orphaned cubs. No one knows how many of those encounters were bluff charges where the bear would have pulled up short of an actual attack.

Explosion of irritant

Remarkably, most bear encounters leave humans unscathed. Usually the bear turns and leaves, trying to avoid the human. When surprised, both grizzlies and black bears often “bluff” charge—rushing forward aggressively but stopping at the last second before contact. “It’s how they deal with other species,” says Frey. “They’re pretty tolerant of us, if they’ve been given a warning that we’re there. Bears get to be old bears by being cautious.”

Although no deterrent is 100 percent effective, bear spray has stacked up an impressive track record for human safety and as a nonlethal deterrent. “Bear spray provides a way to smack ‘em without worrying about the aftermath,” says Smith. Consider that nature is full of creatures that successfully deploy chemical weapons as self-defense—skunks being the obvious example. With bear spray, you can defend yourself like a skunk does, and both you and the bear will likely walk away—you with a great campfire story, the bear with a great lesson learned.

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