



# Be Bear Aware Campaign



Every year millions of people in North America, from Florida to the Arctic, have the opportunity to enjoy watching bears in the wild. They get to see bears fish, mothers interact with their cubs, or search for food amongst wildflowers and waterfalls.

This presentation was prepared for those rare instances where you may need to use your Bear Spray. Your goal should be to avoid encounters by practicing appropriate bear avoidance techniques and wildlife stewardship.

*Chuck Bartlebaugh, Director*



# Be Bear Aware

Be aware of your surroundings and react to signs of bear activity. If you see fresh signs like these, be prepared for a possible bear encounter. Speak out in a non-threatening tone to make your presence known.

Unholster your Bear Spray and be on alert.





# Camping Sites



## When choosing your camping spot:

- Look for an open area away from trails and thick brush.
- Avoid areas that have recent bear signs.
- Place tents in a line and space tents apart so that animals can travel freely between them and not feel trapped.
- Know that camping with pets can draw bears and other wildlife to you.

## To keep a safe and clean campsite:

- Keep your sleeping bags and tents completely free of food, food odors and beverages.
- Realize that personal items such as toothpaste, deodorants and soaps have odors that can attract bears.
- Never cook in your sleeping area.
- Never sleep in clothes that you have cooked or handled fish or game in.
- Be cautious of snakes and other insects when gathering wood and picking up belongings off the ground.
- Rehearse what your group will do if a bear appears in your camp or while hiking.

**ALWAYS KEEP A FLASHLIGHT**

**AND BEAR SPRAY**

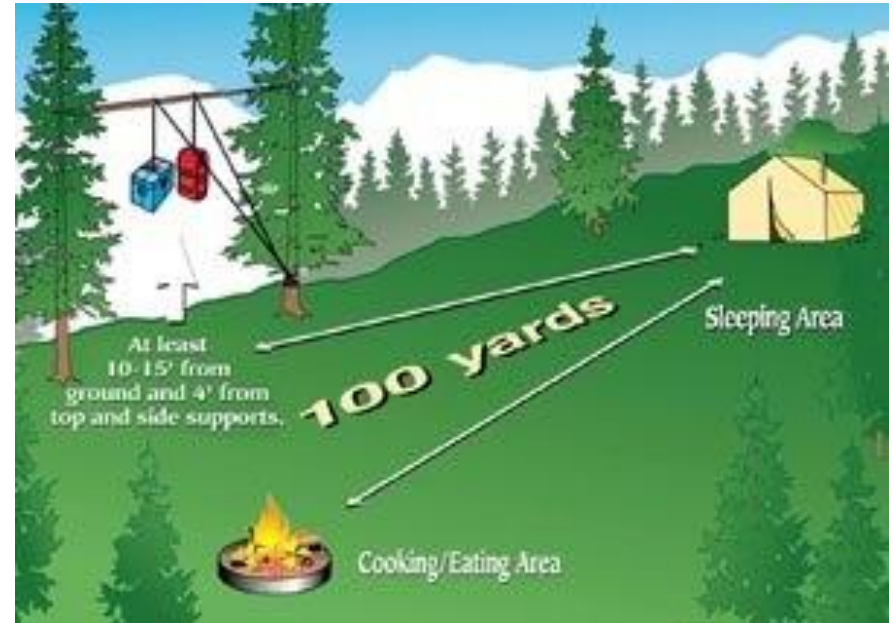
**READILY AVAILABLE IN YOUR TENT**

**AND WHILE COOKING.**

# Camping Sites

## To set up your camp:

- Have your cooking, eating, and supply areas at least 100 yards from your sleeping area.
- Store food and odorous items by hanging at least 10 to 15 feet above ground and 4 feet from top and side supports – or – store in bear resistant containers.
- Store pet food, livestock feed, and garbage the same as food. Never bury it and pack it out.



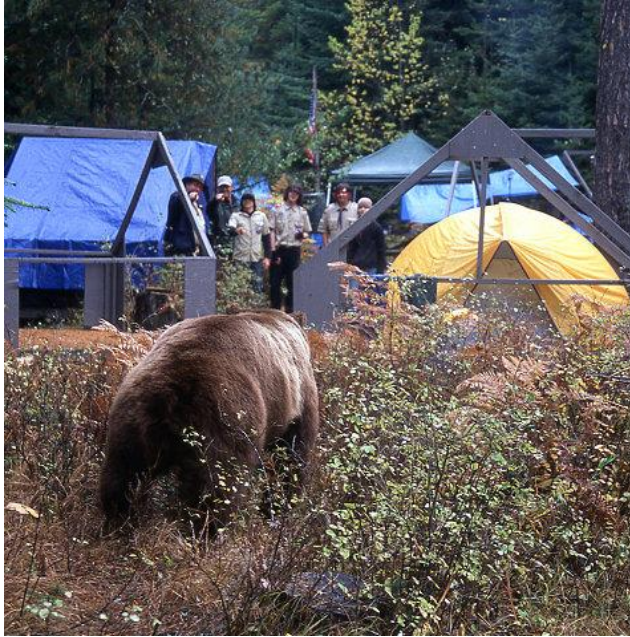
## Safe cooking habits:

- Avoid cooking odorous foods.
- Select air tight or individually sealed foods.
- Plan meals so that there are no leftovers.
- Strain food particles from dishwater using a fine mesh screen and store with garbage.
- Dump dishwater 100 yards from your sleeping area.
- Burn combustible garbage completely to eliminate odors.

**KEEP BEAR SPRAY READILY AVAILABLE**



# Bear in Camp



Habituated and food conditioned bears may enter your campsite during the day or at night. This requires working as a group. Once you are close together, do the following to chase the bear out of the camp:

- As a group, yell at the bear. If possible bang pots and pans to get the bear away from the tents and camping equipment.
- Only use your Bear Spray in a way that will not compromise your group or camping equipment.
- Bear Spray has been successfully used to get a bear to leave a camp site but not necessarily to keep it away.
- Testing on dump bears that were not acting aggressive showed they could be chased from the dump but would return later for the established food source.
- Set up a monitoring system and a buddy system in case the bear does come back.
- Leave the area and report the incident to local authorities.



# Bear Entering Your Tent

Bears often visit camps at night, sniff around and leave. In case one doesn't:

- When sleeping, keep your bear spray and flashlight together in a consistent spot and within easy reach.
- If a bear is entering your tent, either through the entrance or by ripping the side, spray a short burst directly into the bear's face.
- Exit the tent as quickly as possible to avoid excessive inhalation of bear spray. Most people should be able to function, but it is important to leave the confined space as quickly as possible.
- Be prepared to spray the bear again once out of the tent.
- Group together and retreat to a place of safety (car, tree, building, etc.).





# Retrieving Game

Hunt and field dress your game with a partner and monitor your surroundings.

## Field Dressing & Quartering

- Be aware that more than one bear may be drawn to your kill-site.
- When field dressing, have your Bear Spray within reach with the safety clip off.
- Monitor the area around you while you work. (Avoid tunnel vision.)
- Separate the carcass from the entrails and leave in a clearing where it can be seen from a distance on return.

## Retrieving

- When returning to your game, watch for ravens and other scavengers. They can signal the presence of bears.
- More than one bear may have bedded down near your game. Monitor the carcass from a distance before approaching.



If a bear has claimed your carcass, leave the area and report it to your local wildlife management agency.

**ALWAYS HAVE YOUR BEAR SPRAY READY.**



# Working Off-Trail



**Hunting, fishing and working** in bear country sometimes requires individuals to travel off-trail. This leads to a higher risk of sudden close encounters. Use the following techniques to increase your awareness in bear country:

- Heighten your ability to **listen carefully** for breaking branches, rustling leaves, and even heavy breathing and growling.
- Use your **sense of smell** to locate carrion before you find it with an overprotective bear on it. Bird activity may indicate a bear.
- When traveling off-trail try to **avoid going through thick brush**. Go around or between large brushy areas.
- When near **fast-moving water** or on **windy days** be extra alert. Your sounds and scent may not alert a bear of your presence.
- **Scan the area** ahead on both sides and periodically behind you, looking for things out of place, and monitor shadows.
- **Have your Bear Spray ready** if you feel uneasy or you start seeing numerous bear signs (scat, diggings, claw marks on trees, rocks and logs flipped over, etc.).

# Bear Behavior

The degree of aggressiveness by bears can vary greatly.

- **Nuisance or curious bears** may not show any aggressive behavior, but once close enough, could charge without warning.
- A **startled bear** may charge towards you to find out what you are. Bears may bounce on their front legs, have their ears erect, stomp, turn sideways, and pace back and forth. They will then either retreat or recharge.
- A startled **mother bear with cubs** may be more agitated and respond more aggressively by charging immediately.
- A dominant bear **guarding a fresh kill** may respond aggressively in a spontaneous and non-stopping charge.
- A **predatory bear** (black or grizzly) may show stalking behavior, such as disappearing and reappearing, but not showing aggression. It may charge when it gets close enough or finds the opportunity.
- Bears that have learned to **tolerate** other bears or people may approach closer than normal, then charge. When bears are near, have your Bear Spray ready.





# Visualizing Bear Encounters



- Practice removing the bear spray canister from the holster until it is spontaneous.
- Practice removing the safety clip by placing your thumb in front of the curled clip and pulling it back. Keep practicing until it is spontaneous.
- Practice holding the can firmly with either one hand or two hands until it is spontaneous.
- Practice directing the canister slightly downward so the spray billows up in front of the bear.
- Use mental visualization to prepare yourself for a charge that may never happen.
- Use your ears, eyes, and nose to be aware of your surroundings and your voice to call out, “Oh bear, hey bear,” to let bears know you are coming down the trail.
- Learn to identify bear activity signs, such as scat, diggings, rocks and logs rolled over, claw marks, and pungent smells.





# Bear Spray: Research & Development

Bear Spray was developed in the mid-1980s during a research project conducted by Border Grizzly Project at the University of Montana.

**Carrie L. Hunt**, Principle Investigator

**Dr. Charles J. Jonkel**, Border Grizzly Bear Project Leader

**Dr. Bart O’Gara**, Wildlife Professor

**Bill Pounds**, Founder of Counter Assault Bear Spray

## Original Recommendations of the University of Montana

- 1) Bear spray should be capable of spraying for a distance of at least 30 or more feet. This provides valuable time for the spray to affect the bear’s mouth, throat, nose, lungs, eyes, and ears, disabling it from charging and attacking.
- 2) Bear spray should spray for at least 7 seconds. Longer spray durations allow you to compensate for weather variables, multiple charges, or an encounter with more than one bear.
- 3) The spray needs to disperse in a powerful and expanding cone-shaped cloud that does not require aiming. Aiming takes too long. Instead, spontaneously spray downward in front of the charging bear and continue spraying until the bear diverts its charge.



Carrie Hunt and Cassie.

# Bear Spray: History

A4 Jackson Hole Guide, Wednesday, September 30, 1998

## EDITORIAL

### Bring an oil-based spray to spice up backcountry trips

Be prepared.

Sound advice, for sure, but all too often good words such as these vanish like smoke in the evening sky.

In rugged country, there's no room for ignorance. Whether in winter, summer, spring or fall, Jackson Hole has the ability to surprise any traveler with a dangerous and potentially fatal challenge.

It would also make sense for wildlife managers to delve a bit deeper into the pepper spray issue in order to come up with a firm recommendation as to what brands, and types of sprays, have earned their approval.

were equipped with an apparently less-than-satisfactory pepper spray.

While Wyoming Game and Fish biologists continue to assert that pepper spray is more effective in deterring a grizzly attack than a gun, we learned this week that oil-based pepper sprays seem to be most effective at fending off grizzlies.

In light of the increased possibility of encountering a grizz as their numbers rise and the volume of people heading into the backcountry continues to increase, pepper spray makes good sense for hunters who prefer not to be the hunted.

It would also make sense for wildlife managers to delve a bit deeper into the pepper spray issue in order to come up with a firm recommendation as to what brands, and types of sprays, have earned their approval.

In 1998, the Yellowstone Ecosystem Subcommittee of the Interagency Grizzly Bear Committee asked Chuck Bartlebaugh and the Be Bear Aware Campaign to conduct a review of what was and wasn't Bear Spray.

- Bear Spray was working in some areas but not others.
- Some people using Bear Spray were injured, and some died.
- Regional and national news media were asking why.

This effort resulted in formal registration of bear sprays with the Environmental Protection Agency (EPA) and established minimum specifications and labeling requirements.





# Bear Spray: EPA Registration

The EPA implemented a formal registration and verification program with all manufacturers claiming to produce a Bear Spray.





**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
WASHINGTON, D.C. 20460

June 5, 2000

**Pepper Spray**

**Bear Spray**

**Alleged Similarity Between Human-Deterrent and Bear-Deterrent Products**

|                                                                                              | Human-Deterrent   | Bear-deterrent |
|----------------------------------------------------------------------------------------------|-------------------|----------------|
| Regulator                                                                                    | CPSC <sup>1</sup> | EPA            |
| Registration Required Prior to Marketing Product                                             | No                | Yes            |
| Chemistry Data reviewed                                                                      | No                | Yes            |
| Complete product identity required                                                           | No                | Yes            |
| Formula checked for ozone-depleting chemicals and other ingredients of toxicological concern | No                | Yes            |
| Toxicity Data required                                                                       | No                | Yes            |
| Efficacy Data required                                                                       | No                | Yes            |
| Distance Requirement                                                                         | No                | Yes            |
| Can Size Requirement                                                                         | No                | Yes            |
| Duration Requirement                                                                         | No                | Yes            |
| Enforcement potential                                                                        | Low               | High           |
| Labeling requirements                                                                        | Little            | Extensive      |

<sup>1</sup>CPSC = Consumer Product Safety Commission



# Bear Spray: Registration Enforcement

September, 2003: UDAP fined \$17,208.



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8

999 18<sup>TH</sup> STREET - SUITE 300

DENVER, CO 80202-2466

Phone 800-227-8917

<http://www.epa.gov/region08>

DOCKET NO.: FIFRA-08-2003-0015

IN THE MATTER OF:

**UDAP INDUSTRIES**

13160 Yond<sup>er</sup> Road .

Bozeman, MT 59718

Respondent

**FINAL ORDER**

10. Upon consideration of the nature, circumstances, extent and gravity of the violations, and Respondent's ability to continue in business, the size of Respondent's business, prior history of compliance, degree of culpability, lack of economic benefit resulting from the violations, its good faith and immediate effort to comply once informed of the violations, other matters as justice may require, and upon consideration of the entire record herein, EPA offers this CESA under its expedited enforcement procedures in order to settle the violations based upon the findings noted above, for the total civil penalty amount of **seventeen thousand two hundred and eight dollars (17,208.00).**

# Bear Spray: Read the Label

Look for the following when purchasing Bear Spray:



- Uses the word **“Bear”** to indicate that it is a **Bear Spray**.
- Clearly indicates the product is **for deterring bears from attacking humans**.
- Clearly indicates the product is **not for use on humans**.
- Active ingredient:  
**1% to 2% capsaicin** and related **capsaicinoids**.
- States that the active ingredients **capsaicin** and related **capsaicinoids** are derived from Oleoresin of Capsicum.
- States that the minimum net contents is: **7.9 ounces or 225 grams**.
- Must show the EPA registration number and EPA establishment number.



# Bear Spray: Suggested Spray Duration



Suggested minimum spray **duration** is at least **7 seconds**. This is how long the can will spray until it empties, not how long you spray a charging bear. It is suggested you spray a burst for 2-3 seconds, but you may need to re-spray for the following reasons:

- To compensate for **wind** or **cold weather**.
- **Multiple bears**—mating pairs, mothers with cubs or juvenile pairs.
- Bears may **zig-zag** or **circle around** the spray cloud when charging.
- Bears may charge, **stop**, **retreat** and **recharge**.
- For other encounters during the **hike out**.
- Any charging bear may require **more than one spray**.
- For these reasons, it is suggested that **group leaders carry two cans** and other adults and responsible teenagers carry their own can.

# Bear Spray: Suggested Spray Distance



Suggested minimum spray **distance** is **25 feet**. This is how far the expanding spray cloud can be directed (without wind).

- This creates a wide and expanding cloud, **a barrier between** you and the bear.
- When the charging bear is **within 60 feet**, it will meet the cloud **at approximately 30 feet**, giving the bear time to feel the effects of the Bear Spray and divert its charge.
- Be prepared for the bear to **re-charge**, or for **other bears to charge**, requiring additional sprays.
- Be prepared to **adjust for wind or cold**.
- Charging bears may stop short of you, posture aggressively and **retreat**. They may then **complete the charge**.

*Source: Bear management specialists with State and Federal Wildlife Management Agencies and incident reports, and the original Bear Spray research.*



# Bear Spray: Effects on a Charging Bear



***Active Ingredient: 1%-2% capsaicin and related capsaicinoids.***

**Bear Spray produces an irritating and inflammatory reaction** that is amplified by a bear's more developed sense of smell. Bear Spray overwhelms the bear's primary means of perception.

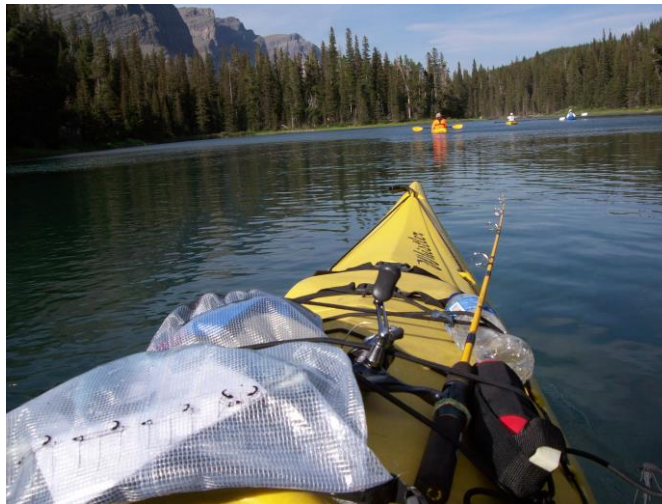
- The charging bear's eyelids become swollen, watering and burning and difficult to keep open. The bear's ability to see is disrupted and it **can no longer focus on its target.**
- The nose becomes swollen, irritated and runny. The bear's sense of smell is **overloaded and interrupted.**
- The mouth, throat, and lungs become irritated and inflamed. The mouth fills with saliva, the throat swells, and the lungs contract. **The bear's ability to breathe deeply is made difficult.** The muscles may no longer receive enough oxygen to sustain the attack.

**None of these effects are permanent or long-lasting.**

# Carrying Bear Spray



- Bear Spray can easily be carried in an accessible hip or chest holster. (Practice removing the can from the holster so that it is spontaneous.)
- During winter months, put your Bear Spray in an insulated bottle warmer and place in a readily accessible side pocket to keep the ingredients warm for better performance.
- Rafters and kayakers can attach their Bear Spray to their craft or carry it in a chest holster.
- Mountain bikers should have it readily accessible in either a chest or hip holster.

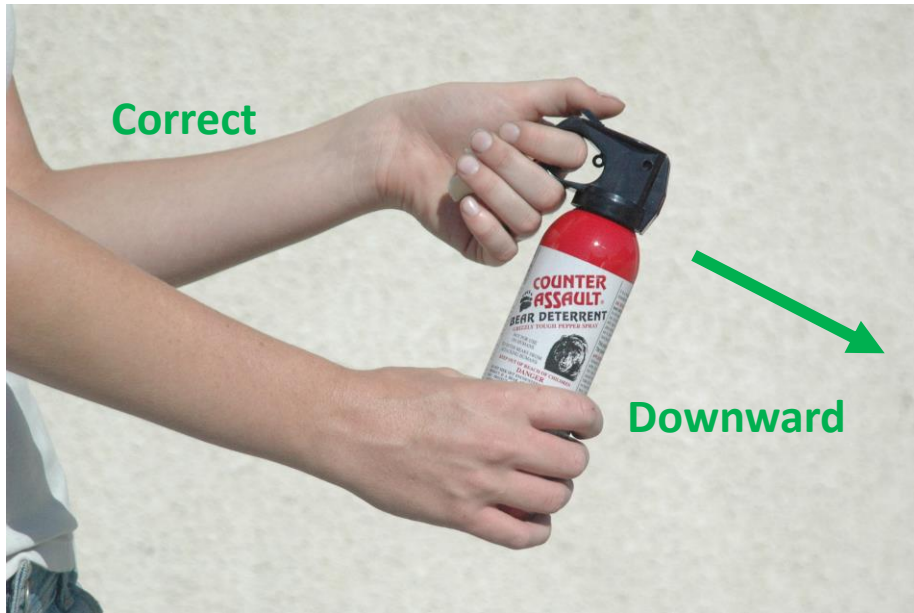




# Angle of Spray

**Tilt can slightly downward so the spray billows up in front of the charging bear.**

**Do not let the can tilt upward. It will shoot over top of the charging bear.**



**It is important to spray slightly downward. A bear often charges with its head down near the ground, making it easy to spray above the charging bear.**

# Bear Encounter



A mother grizzly and her three cubs come out of the woods onto the road you're walking on. Notice that the cubs are almost as big as the mother. The Bear Spray you are carrying sprays for **4 seconds**? **5 seconds**? **7 seconds**? Or **9 seconds**? Which bear would you spray first, and will you have enough additional spray for the others? Did you bring one can or two?



# Bear Encounter



If you came across this situation on foot, how would this bear respond? How would it charge? How would you use your Bear Spray?

This bear is obviously on a fresh kill and could charge spontaneously and very aggressively, leaving little time to respond. (Be prepared.)

# Bear Encounter: Body Language

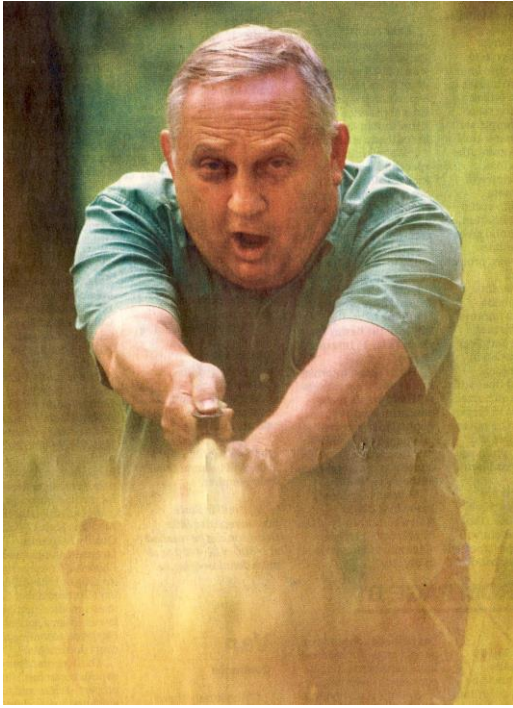


Photo by: Michael Gallacher, Missoulian

**Your voice and body language while spraying can help convey a message to the charging bear to stop or divert its charge.**

- Thrust the Bear Spray in front of you, while telling the charging bear in a firm voice **“NO”, “STOP”** or **“GO AWAY.”** The bear does not know these terms but may recognize the tone of your voice and body language.
- If you don’t have experience using a firearm, you may need to hold the Bear Spray in two hands so that the can does not tilt up. You need to **spray slightly downward** at the front of the charging bear.
- Let the Bear Spray do its job by affecting the charging bear’s nervous system, temporarily overwhelming its eyes, nose, mouth, lungs and ears.
- Bears have responded to the whooshing sound, the expanding orange cloud, the voice and the body language by diverting their charge without entering the spray cloud.
- Once the charging bear has retreated, **leave the area** immediately.

# Bear Encounter: On the Road



- Give all animals, especially bears and bison, plenty of space when they are near or crossing a road.
- Observe or photograph them from inside your car.
- Do not drive close to the animals. All large animals can cause serious damage to your vehicle, and bears are smart enough to open your door.
- Never entice animals to your car with food or throw food at them - this teaches them to frequent roads, and can result in fatal vehicle-animal accidents.
- **Most importantly, be sure you do not block the animals' intended path or get between an animal and her babies.**

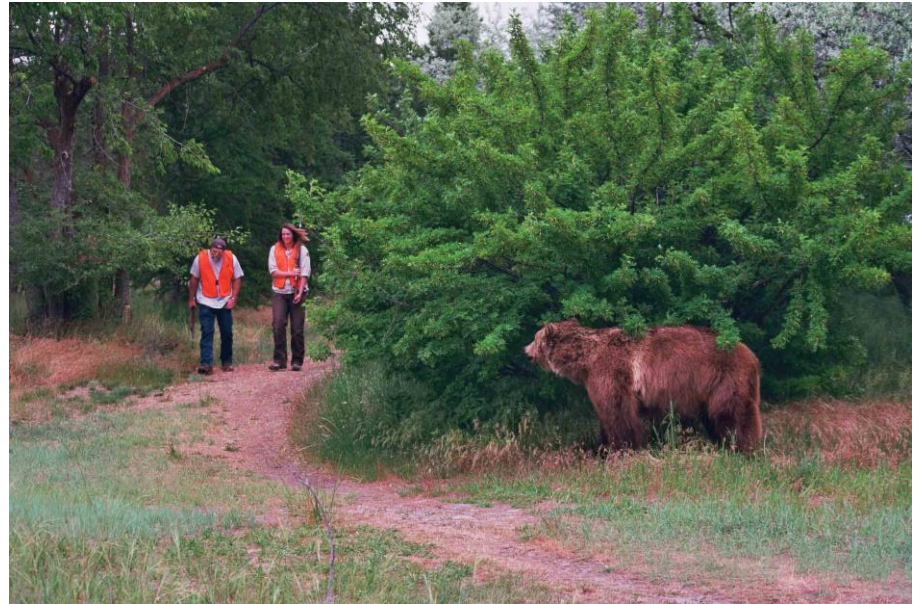


# Bear Encounter: Along the Trail

**If you encounter fresh bear signs** such as tracks, scat, diggings, claw marks on trees, or rolled over rocks and logs, unholster your bear spray and be on alert.

**If you do notice a bear**, attempt to detour as far away as possible or return the way you came. Monitor the bear's behavior. In some cases you may need to wait for the bear to leave the trail area before continuing your hike.

**If the bear is approaching you**, allow the bear to see and hear you. Speak in a monotone, non-threatening voice. The bear should divert its direction and avoid you. If the bear does not change its direction, step off the trail giving the bear room to pass by.

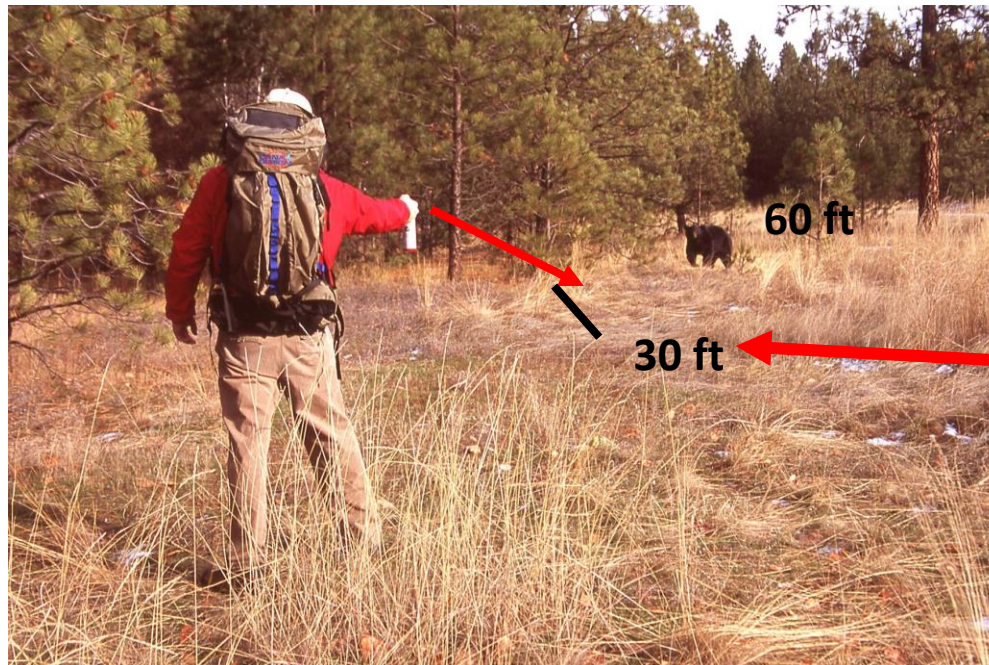


**If the bear continues to follow you**, spray a short burst of bear spray at the bear. Sometimes the whooshing sound of the spray and the forming cloud is enough to deter the bear. If the bear still continues to approach you or charges, spray downward at the front of the bear and yell No! Stop! Go Away! By doing this you are letting the bear know you are taking a stand and will fight.

# Bear Charge: From a Distance

You may encounter a bear that is surprised and agitated, but not charging. It may run side-to-side, run at you and retreat, and run towards you again. Have your bear spray ready and cautiously back away while monitoring the bear's reaction. **A charging bear can travel 60 feet in 1.6 to 3 seconds.**

- If the **bear charges from a distance of about 60 feet**, direct your bear spray downward to a point 30 feet in front of you toward the charging bear and spray.
- The Bear Spray will billow up and the charging bear will meet the expanding cloud at about 20-30 feet.
- If the bear continues to move closer, direct your bear spray downward toward the front of the bear and keep spraying until it diverts its charge.





# Bear Charge: From 30 Feet Away

Most charges take place with the bear charging from approximately 30 feet. This often happens when the bear is at a berry patch, or, near a trail and is surprised by hikers.

**When an agitated bear charges from 30 feet away, you must spontaneously deploy your bear spray.** There is no time for hesitation.



- Direct the spray downward at the front of the bear and spray continuously.
- Ideally, the bear will meet the cloud at approximately 15 feet and have enough time to feel the effects of the bear spray and divert its charge.
- In some cases, the whooshing sound and the orange cloud has caused the bear to stop, reassess its charge, and either retreat or charge again.
- If you think the bear is going to make contact, drop face down, protect the back of your neck with your hands and continue spraying the area you and the bear are in.



# Bear Charge: From 15 Feet Away

Sometimes a bear in thick brush or concealed in a day bed will charge without warning. Often they are **less than 15 feet away** and will make contact before you even have a chance to get your bear spray out.

As soon as you can, start spraying the area you and the bear are in. If you can, direct the bear spray toward the face of the bear. If the bear makes contact it may shake or drag you. Try to get face down to protect your vital organs, clasp your hands behind your neck, and continue to spray.

Once the bear feels the effects of the inflammatory and irritating agent, it should retreat.

Do not move or get up until you are sure the bear has left the area.





# Bear Spray Works on Cougars, Wolves, Coyotes and Moose

- Bear spray has been successfully used in deterring attacks by cougars, wolves, coyotes and moose.
- As with charging bears, **additional sprays (up to two or three times)** were sometimes needed to stop the aggressive advances.
- There is only anecdotal evidence for this and there has been no formal EPA testing to verify its effectiveness. Because of this, bear spray **cannot be sold for use on other animals**, but individuals can use it in self-defense against them.
- Use the same techniques for spraying bears to spray cougars, wolves, coyotes and moose.



# Bear Spray vs. Gun?

## THE SPOKESMAN-REVIEW

SATURDAY, SEPTEMBER 24, 2011



MOSTLY SUNNY ▲ 91 ▼ 55

WWW.SPOKESMAN.COM

# Gunshot killed hunter during grizzly's attack

Shooter's family says investigators think bullet ricocheted

By Chelsea Bannach

chelseab@spokesman.com, (509) 459-5424

A hunter who died during a grizzly bear attack was killed by a single gunshot wound to the chest, the Montana State Crime Lab medical examiner announced Friday.

Steve Stevenson, 39, was killed

when his hunting partner, Ty Bell, 20, shot the grizzly multiple times in an attempt to stop the bear's attack on Stevenson, according to the Lincoln County Sheriff's Office. One of the rounds struck Stevenson in the chest.

Stevenson's funeral was Friday in Winnemucca, Nev. Ty Bell was a pall-

bearer.

"It has been a terrible, terrible journey," said Belinda Bell, Ty Bell's stepmother.

Investigators have indicated to her family they believe the bullet likely hit the bear first, she said.

See HUNTER, A7

### ALSO TODAY

» **Study:** Yellowstone National Park will review ways to reduce encounters between bears and humans/**Page A5**

### COMING SUNDAY

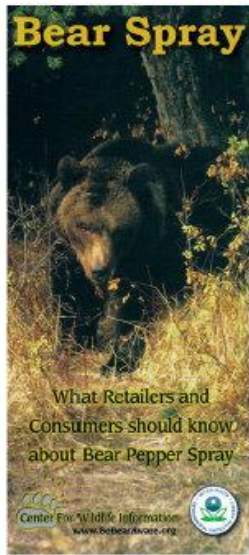
» **Outdoors:** A look at hiking in the bear country of Yoho National Park, Canada.

Shot by partner during a polar bear attack:









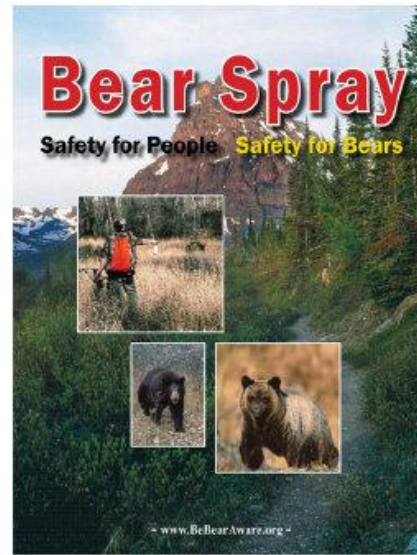
Bear Spray Brochure



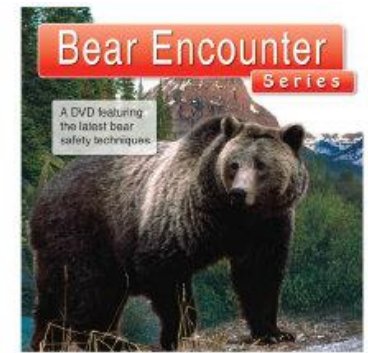
Hiking In Bear country



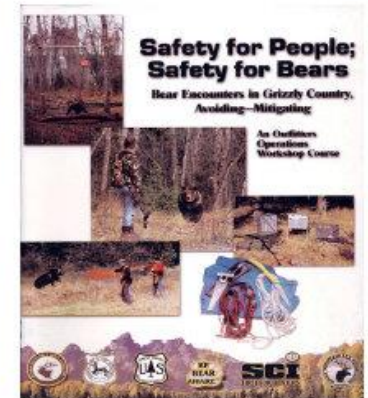
11x17 Bear Spray Poster



CWI Bear Spray Instructing Guide



Bear Encounter Series #1



Instructors Guide For Training, Employees and Guests



4x6 Bear Id Card



4x9 Bear Spray ED Card





Presenting bear avoidance education programs across  
the United States and Canada since 1976.

[bearinfo@cfwi.org](mailto:bearinfo@cfwi.org)



[facebook.com/bebearaware](https://facebook.com/bebearaware)



[youtube.com/bebearaware](https://youtube.com/bebearaware)

**(406) 239-2315**