

WILDERNESS 911: RATE YOUR ODDS P.57

# BACKPACKER

THE OUTDOORS AT YOUR DOORSTEP

**45  
NEW HIKES  
NEAR YOU  
+ REGIONAL  
MAPS!**

**EXTREME TRAILS**  
EPIC STARS, TREES, BERRIES,  
WILDLIFE & SOLITUDE

**10 SKY HIKES**  
RIDGE ROUTES WITH  
ENDLESS VIEWS

**ALL-PURPOSE  
PACK TEST**  
5 SWEET  
VALUES

# TOUGH GUYS

Ranger, guide, smokejumper, Special Forces—could you cut it?\*

\* WIN OUR TOUGH-GUY  
CHALLENGE P.82

**NEW!**  
**SURVIVAL SECTION**  
WHEN BEARS ATTACK



# BASECAMP Survival



## Rate Your Fundamentals

Hard person or house mouse? To find out where you stand, take this catch-all quiz, which kicks off our new self-reliance section.

**1. While hiking in a cold drizzle, you start to shiver and stumble. You should do all of the following EXCEPT...**

- A) Eat a snack and drink sugary liquids like cider or cocoa.
- B) Swap wet clothes for dry, insulating layers and do jumping jacks.
- C) Pee.
- D) Take a break.
- E) Open your pit zips.

**2. True/false** Give a hypothermic person warm liquids, not hot ones.

**3. If the sun is setting on your right, you are heading in which direction? Oh yeah, Christmas is next week and you're in Yellowstone.**

- A) West
- B) South
- C) Northwest
- D) Southeast

**4. Fill in the blank** To re-warm a person with moderate hypothermia, apply heat packs or warm water bottles to the victim's head, neck, side, groin, and \_\_\_\_\_.

**5. Match the sound to the typical distance it travels:**

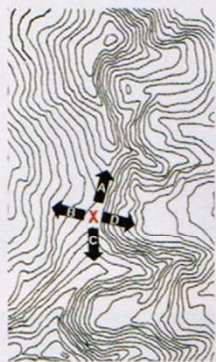
- |                          |                     |
|--------------------------|---------------------|
| A) Human voice           | i) 100 to 200 feet  |
| B) Whistle               | ii) 200 to 300 feet |
| C) Banging pots and pans | iii) 300 feet       |
| D) Dog bark              | iv) 1 mile          |
| E) Gun shot              | v) 1 to 2 miles     |

**6. True/false** If a snake bites your leg, tie a tourniquet around the limb to slow the flow of venom to your heart.

**7. Short answer** Name at least one survival application for each of the following:

- A) Credit card
- B) Trekking pole
- C) T-shirt
- D) Camera

**8. You're at X. What's the easier way down?**



**9. A rescue helicopter just flew over your position. Emergency signals are more visible when they have size, contrast, color, and \_\_\_\_\_.**

**10. True/false** Moss always grows on the north side of trees.

**11. Drinking from which water source is more likely to be fatal?**  
**A)** A remote cattle pond with thick, brown water, several cow patties on the bank, and no flow  
**B)** A clear alpine tarn free of moss and fed by a stream flowing from a long-closed mine  
**C)** A beaver pond flecked with mosquito larvae

**12. Which can be signs of panic?**

- A) Walking fast or running
- B) Tingling in fingers and toes
- C) Short, shallow breathing
- D) Racing pulse
- E) Tunnel-vision thinking
- F) All of the above

**13. What is the best way to find water in the desert?**

- A) Slice open a barrel cactus.
- B) Check boulders and rocks for shaded holes and crevices containing old rain water.
- C) Dig into the soil beneath trees and bushes.
- D) Tie plastic bags around leaves and branches.

**14. True/false** When lost, following streams is a good idea because they'll eventually lead you to a road.

**15. Rank these causes of NPS rescues from most common to least:**

- A) Falls
- B) Darkness
- C) Inattention
- D) Cold weather
- E) Intoxication
- F) Fatigue

**16. The first thing you should do when you realize you're lost is...**

- A) Plot your position on a map.
- B) Stop and try to retrace your steps in your mind.
- C) Dial 911.
- D) Yell and blow a whistle.
- E) Click your heels three times.

**ANSWER KEY** 1. D. Immobility chills you. (Peeling warms you because you don't waste energy heating a full bladder, and pit zips let out sweat vapor, preventing clamminess.) 2. True. Gradual warming of victim is safer. 3. D. In North America, the sun tracks lower in the southern sky during winter. 4. Armpits. Applying heat where blood circulates close to the skin raises the core temperature faster. 5. A, i; B, iv; C, ii; D, iii; E, v 6. False. Tourniquets increase tissue damage by preventing the blood from diluting the toxin. 7. A, flash the hologram to signal rescuers; B, splint a fracture; C, tie it around your shins to sop up dew; D, signal with a bright flash. 8. B, a gentle slope. A and C go up; D drops off a cliff. See [backpacker.com/navigation101](http://backpacker.com/navigation101) for a tutorial. 9. Movement. To create contrast, use right angles, letters, and bright colors. 10. False 11. B. Risk of toxic metals. No vegetation = suspect. 12. F. Sit down, drink, eat, and take slow, deep breaths. 13. B. Though some barrel cactus species contain potable liquid, most are filled with vomit-inducing alkaloids. Digging wastes energy; and plastic bags only yield enough water in humid, sunny areas. 14. False. Water often follows the steepest, slickest route down. 15. F, 22%; C, 9%; A, 8%; B, 3%; E, 3%; D, 1% 16. B



# Disaster on Katahdin

Name Michael Hays **Predicament** Shattered kneecap, dehydrated, starving **Location** Baxter State Park **Days lost** 4

**[1]** His last full meal was lunch the day before (the diners were closed during his night drive up). Beware: Low blood sugar causes foggy thinking.

**[2]** Viewing terrain from a single vantage impairs your ability to judge height and depth. That's why cartographers compare two distant viewpoints when making tops.

**[3]** 80 percent of Katahdin's fatalities have involved hikers who left trails.

**[4]** Katahdin's brush is so dense, rangers wear helmets, goggles, and flannel when venturing into it.

**[5]** On slabs, "crabwalking" works best if you keep your butt up and smear your soles flat on the rock, maximizing friction. On steep, 45°+ climbs, face into the rock or find another way.



**[6]** Unroped falls kill more hikers than any other wilderness hazard.

**[7]** Hays used all of his gauze, wraps, and two rolls of athletic tape. Moral: Match your kit volume to the trip distance, duration, difficulty, and weather. Soloists: Pack even more.

**[8]** A daypack, first-aid kit, knife, watch, flashlight, button compass, guidebook, water bottle, food, and cell phone (no coverage). Missing essentials: a map, lighter and firestarter, effective compass, sunblock, bug dope, a water purification method, and insulating layers, like a puffy jacket.

**[9]** While some streams cross roads, many plunge into steep, wet, and/or inaccessible valleys.

**[10]** 1 banana, 3 granola bars

On a Friday afternoon in May 2010, Ohioan Michael Hays, then 41, was leaving the summit of the rocky and exposed 5,267-foot Katahdin in Maine. He had started up at 8 a.m. and—five hours, 4.3 miles, and 4,000 feet of climbing later—was **exhausted and hungry!** Looking ahead, he saw the trail rise toward Chimney Peak, from which it would then descend 3.3 grueling miles to the Roaring Brook Campground and his car. As he started, though, Hays spotted what seemed like a good shortcut to his right: a flat-looking field about **1,000 feet below.**<sup>2</sup> "I thought I could hop down the rocks, cross the field, and rejoin the trail below to cut several miles off of my return," Hays says. He **left the marked path**<sup>3</sup> and started scrambling down the slope.

Soon Hays hit a **six-foot-tall tangle of dense brush, vines, and thorns.**<sup>4</sup> Branches lashed his face, and twice he nearly tripped in scrub-covered pits. He fought through and eventually reached a 45-degree, 30-foot-long granite slab. Hemmed in by brush, Hays decided to **butt-scoot down it.**<sup>5</sup> Suddenly, his heel slipped, and **he began sliding uncontrollably.**<sup>6</sup> Spotting a crack in the slab, he jammed his foot in it to stop his fall. This worked, but it spun him around and slammed his legs into the crack, shattering his left kneecap.

An experienced solo hiker, Hays had taken shortcuts before, but "all the other times I cheated the trail, I'd been successful," he says. After his slide, Hays **bandaged his knee,**<sup>7</sup> gathered **his gear,**<sup>8</sup> and began hobbling along a small stream down the slope. He figured it would join the larger Roaring Brook and eventually intersect the campground road.<sup>9</sup> The rest of Friday and all day Saturday, Hays followed the stream into a heavily forested ravine too steep and brush-choked to climb out of. He often stumbled, and his feet were constantly wet. He rationed **his remaining food**<sup>10</sup> and rarely drank stream water, **fearing water-borne pathogens.**<sup>11</sup> At night, he curled up on the sandy banks and tried to sleep, **wearing all of his clothes**<sup>12</sup> to stay warm in the estimated 40°F chill and **clutching his knife**<sup>13</sup> for defense against black bears. On Saturday, he heard a helicopter overhead, but the forest canopy **hid it from view.**<sup>14</sup> Every morning, he turned on his cell phone and dialed 911, but **the call never went through.**<sup>15</sup>

On Sunday morning, Hays reversed course and started moving upstream, seeking higher ground from which to signal a helicopter or find a trail. He **struggled to maintain a positive attitude.**<sup>16</sup> That night—his third without a tent or sleeping bag—he **built an A-frame shelter from pine branches**<sup>17</sup> because he anticipated rain, and he ate his last granola bar. On Monday afternoon, Hays abandoned the ravine, **starving, exhausted, and losing hope.**<sup>18</sup> He stumbled into a sunny patch of forest thinned by a recent fire. A helicopter flew overhead. Hays pulled out his **orange poncho and waded it like a bed sheet.**<sup>19</sup>

In the chopper, crew chief Ron Adams glimpsed the poncho through the window. Unable to land in the clearing, the pilot dropped alpine ranger Rob Tice half a mile away, and Tice **bushwhacked**<sup>20</sup> to Hays's position. As Tice got closer, he began shouting Mike's name. "I'm here! I'm here!" yelled back a very relieved Hays. An hour later, Hays was in-flight to a hospital where doctors operated on his knee and treated him for severe sunburn, insect bites, dehydration, and exhaustion. He later learned he was found **a half mile from a trail and two miles from the road**<sup>21</sup> after the **largest search-and-rescue operation**<sup>22</sup> in Baxter State Park in 40 years. "I didn't respect the difficulty of the environment," says Hays, a mistake he won't make twice.

**[11]** It's better to drink untreated water than to get dehydrated, impairing body and mind.

**[12]** Cargo pants, cotton T-shirt, cotton turtleneck, windbreaker, ball cap, winter hat, cotton socks, orange poncho, hiking boots. Smart move on the raingear and boots, but wool or synthetic layers wick moisture better than cotton, keeping you warmer and drier.

**[13]** Statistically, lost hikers should worry more about hypothermia, dehydration, and accidents than bears. Maine's last fatal attack was in 1930—and involved a caged bear.

**[14]** When lost, stay visible for rescuers.

**[15]** Still, rescuers knew he was alive because his phone "pinged" cell towers each time he dialed 911. (See [backpacker.com/cellsignals](http://backpacker.com/cellsignals).)

**[16]** To fight his despair, Hays repeated the mantra "I've got to get home." Staying positive, experts say, can cancel out minor mistakes.

**[17]** Bingo. It looks like this. Also, stuff your clothes with leaves for warmth.



**[18]** By Monday, Hays had lost 25 lbs.

**[19]** Color, contrast, size, and motion are the keys to successful signaling.

**[20]** To mark the route back to the helicopter, Tice tied ribbons to trees.

**[21]** Half a mile sounds small, but a circle with that radius has an area equal to 380 football fields.

**[22]** 40 people, 6 dogs, several choppers