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## How to Escape Your Car in a Flood

Only a foot or two of water can sweep away everything from sedans to trucks. Experts urge drivers to avoid flooded crossings, and to remember a few steps in a crisis.

By Maria Cramer

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As Hurricane Ida brought torrential rains into the Northeast, flash floods overwhelmed cars, trapped passengers and caused people to drown.

In the aftermath of the storm, emergency rescue workers and safety experts are urging people to learn how to stay safe in dangerous

Their advice starts with a warning: Do not try to cross a flooded road. Most vehicles, from tiny sedans to large trucks, will be swept away in just one to two feet of water.

But during flash flooding, many drivers do not realize the danger at crossings.

It is difficult to determine a precise number of accidental drownings in cars because vehicle fatalities are classified differently from region to region, said Gordon Giesbrecht, a professor at the University of Manitoba who has studied drownings and human responses to extreme environments. But he estimated that about 350 to 400 people a year drown in their cars in the United States and Canada after their vehicle falls into a body of water or becomes stranded in flooding.

He urged people to get out of their vehicle as soon as possible, saying there may be very little time before the water becomes inescapable. A vehicle that is carried away could also roll over, making escape virtually impossible. "Bottom line is if the car stalls out in water, get out and on the roof," Dr. Giesbrecht said.

"Never drive into a flooded roadway if water is covering it, period," said Michael Berna, an instructor with Rescue 3 International who trains military and emergency personnel on water rescues. Many people, he said, "continue to drive into it believing they will make it to the other side. Before they know it, it's too late."

## 'Seatbelt, Windows, Out,'

Your car has stalled. The water is rising. Panic is setting in.

The next thing that rescuers want you to remember is an acronym, SWOC — seatbelt, windows, out, children first.

Experts say the priority should not be to call 911, or to get the door open — the weight of the water against the vehicle will make that impossible, Dr. Giesbrecht said.

People "don't think well under stress," he said. "They revert to instinct or things they've heard all their lives, like let the car fill with water so it will equalize the pressure. Problem is, by then you'll be dead."

The best chance of survival, Dr. Giesbrecht said, will come from following these steps:

- · Remove your seatbelt.
- · Roll down your window immediately (electric windows should still work after an engine has stalled).
- If you have children with you, push them out first before getting out. Start with the oldest an older child may be more likely to hang on to a seatbelt or the roof of a car, allowing you to help the younger ones.

- · Get out.
- Climb on to the roof of your car and hang on to whatever you can. Pull a seatbelt strap from the car, if possible, or clutch the rails. Then call 911. Rescuers are much more likely to see you on top of a vehicle rather than inside one that is filling up with water.

  But rescue experts say that it's most important to try to avoid such a crisis in the first place. For nearly 20 years, a public safety campaign called "Turn Around, Don't Drown," has warned drivers to avoid crossing flooded streets and to stay off the road during dangerous storms.

Craig Gerrard, the rescue curriculum director at Raven Rescue in British Columbia, said that many people seemed to get into perilous flood conditions "because they're in the comfort of their car and they need to get to the comfort of their family and loved ones."

## Could car technology or a window breaker help?

In Australia and New Zealand, an independent group that gives safety ratings to new vehicles said that, starting in 2023, it would award more points to manufacturers that equip cars with systems that would help someone survive a car in flood conditions.

To qualify for a higher safety rating, cars would have to show that doors can be opened from the inside and outside without battery power and that electric windows would remain operable for up to 10 minutes, according to the agency, the Australasian New Car Assessment Program.

The U.S. National Highway Traffic Safety Administration said in a statement that there were no requirements "or plans for future requirements regarding vehicles submerged in water."

Consumers should not expect carmakers in the United States to create such technology, said David Cadden, professor emeritus of entrepreneurship and strategy at Quinnipiac University.

"I haven't heard of any new engineering approaches to increase survivability of a regular crash and I haven't heard much in terms of surviving the car going into water," Professor Cadden said.

What about getting a car window breaker that would shatter glass?

Dr. Giesbrecht said he had two of them — one for each of his vehicles. But he said he did not trust that in a moment of panic he would be able to find it in the glove compartment or center console. Some survival videos recommend using a headrest to break a side window, but that method may waste precious seconds of escape time only to prove futile with thick glass or a well-installed headrest.

"You need two main tools," Dr. Giesbrecht said. "You need your brain to remember SWOC and you need your finger to push the button on your electronic window."

## Are practice drills worth it?

Practice, Dr. Giesbrecht said, "is a great idea."

And children might actually have fun crawling in and out of the window, he said.

"Very simple to do," Dr. Giesbrecht said. "No cost and it could save your life."

Judy Kuriansky, a psychologist and emergency mental health responder, agreed that such training was "extremely important," with the caveat that a parent should calmly explain the goal of the exercise.

"If you say, 'The water is coming, and it's flowing and you're drowning and you can't breathe,' that would be traumatizing," Dr. Kuriansky said.

Instead, she advised saying: "Everybody has emergencies. We all have emergencies and there are things that we can do to prevent being in trouble and to keep ourselves safe."

Mr. Gerrard, the rescue curriculum director in British Columbia, said he questioned whether practice drills would help in a moment of panic. Even in professional training exercises, where flooding waters are simulated and people are wearing life vests, the rushing, cold water will cause shock and fear.

"I think it's similar to the glass breaker," Mr. Gerrard said. "You might have it, but in a time of need is that muscle memory really going to be there from your training?"

He recommended taking a day to explore and find alternate routes home.

"Knowing an escape route that has a higher ground — that's a great thing to preplan for," he said. "It also calms people's nerves too."

Captain Berna, however, said he encouraged people to practice getting out of a flooding car.

"Absolutely," he said. "But, once again, they should never be placed in these conditions."

Maria Cramer is a breaking news reporter on the Express Desk. More about Maria Cramer