

Your smartphone got wet. Here's what not to do first

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Credit: Vojko Kalan/public domain

Smart phones and water just don't mix, as thousands of people in Texas are learning to their distress during the flooding there.

Experts say even if a [phone](#) is drenched, there are steps you can take to recover it—but it takes patience and the ability to leave the phone alone.

What kills a wet phone is electricity, said Gary Tan with DE iPhone repair, a San Francisco-based company that offers multiple sites for smart phone repair and drying.

"Do not charge it. Do not plug it in to see if it works. If it's on, electricity will flow, it will touch the [water](#) that's inside and that's when you fry the (circuit) board," he said.

This is also true even if your phone is still working after it was dropped in water.

"You didn't get lucky. Turn it off!" said Craig Beinecke, co-founder of TekDry, a Denver, Colo.-based company that has more than 600 sites nationwide where consumers can quickly get small electronics dried out.

"We see a lot of people who come in and say, 'I dropped it in water and I pulled it out really fast and I figured I got lucky, and then the next day the touch screen didn't work,'" he said.

What actually happened is that it took a while for the water to reach sensitive connections inside the phone. Once it did, the water shorted them out.

In a small number of cases swamped phones are able to dry out on their own over the course of days or weeks. But it's not common.

And while some newer phones are water resistant and can withstand a quick drop in a bucket or toilet, none are water proof.

Drying on the counter is as fast as the rice treatment

Multiple websites suggest sticking electronics that have been submerged in liquid in a bag of uncooked rice, to draw the water out. But that

actually doesn't work and can introduce dust and starch into the phone as well, said Beinecke.

"We did a study, and rice was slower to work than just leaving the phone out on the counter. And neither worked fast enough. After about 48 hours in rice, only 13% of the water came out of the phone," he said.

By the time the phone had fully dried out, corrosion will have had time to damage the delicate electronics inside, he said.

The preferred method to safely dry phones is to boil off the water inside them at low temperatures under vacuum.

San Antonio, Texas-based DryBox has about 60 such sites in Texas and Florida that offer self-service vacuum drying for electronics. The items are placed in a chamber slightly smaller than a shoe box and then put under vacuum while being heated.

The lower the pressure, the lower the temperature at which water boils. The machine allows the water inside the phone to boil off at temperatures that can't damage the components, usually within about 30 minutes.

The sooner a phone is dried out, the better chance it has of surviving a dunking unscathed, said DryBox president David Naumann. In his experience, within 36 hours the chances for success are three out of four. After that it drops down to less than 50%.

"But that's only if they didn't try to charge it or turn it on," he cautioned.

Though for those who can't get somewhere to have their phone professionally dried, there's still hope. In San Francisco, Tan said he'd had people bring in phones that stopped working after being sent through

a washer and didn't bring them in for six months, figuring they were dead and gone.

"We opened it up, dried it, cleaned it and in a couple of cases we've got them working again," he said.

Ocean water is a different story

Plain water, or even toilet or flood water, is bad enough. Salt water is another thing entirely, say experts. The salts in [ocean water](#) are strongly corrosive to electronics and can much more quickly damage a phone.

If it's impossible to get a phone dried out under vacuum within several days, there's one last-ditch trick Naumann has to offer.

"If, and only if, it was in salt water, then we recommend putting the phone in a Ziplock bag with some bottled, purified water and just a pinch of baking soda. It seems counterintuitive, but the baking soda counteracts the corrosiveness of the [salt water](#) until you can get it cleaned out professionally," he said.

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