



Help & FAQ

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POISONED?

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I Swallowed Liquid from a COVID-19 Test Kit

The Bottom Line

Rapid home COVID-19 antigen tests contain a small amount of the toxic chemical sodium azide, but the risk of poisoning is low when these tests are used and disposed of properly.

The Full Story

As the pandemic continues, rapid at-home antigen testing has become an important tool for the early identification of COVID-19 infection. An antigen is a substance that triggers an immune response when the body encounters it. Rapid COVID-19 antigen tests detect specific antigens present on the surface of the coronavirus via a nasal swab. Results may be available in as little as 15 minutes, depending on the brand of test used. Because of this, rapid antigen tests can be used for early identification of COVID-19 infection at home. This helps with public health efforts to limit the spread of COVID-19 and is particularly important as many outpatient testing sites and hospitals are overwhelmed when cases of the virus surge in the community.

Because of recent efforts to expand the availability of at-home testing, rapid antigen tests are available online, in stores, and are being distributed in schools and by community sites. These test kits generally contain a nasal swab, a vial with liquid in it, a cap, and a testing card. While procedures may vary among brands, the testing process usually involves placing the nasal swab tip into both nostrils. This is followed by mixing the test swab with the contents of the vial. This generates a chemical reaction that provides a positive or negative test result.

It is important to know that the vial in many rapid antigen kits includes the chemical sodium azide as a preservative agent. The BinaxNow, BD Veritor, Flowflex, and Celltrion DiaTrust COVID-19 rapid antigen kits all contain this chemical. Sodium azide is a colorless, tasteless, and odorless powder that has been used as a propellant in automobile airbags, an herbicide, and a pest control agent. While it is now most frequently utilized as a laboratory preservative agent, sodium azide

has also been used during the process of manufacturing beer, wine, and rubber. When swallowed, sodium azide can cause low blood pressure, dizziness, headache, and heart palpitations. In more severe cases, seizures, loss of consciousness, and death may occur. Sodium azide is a very potent poison, and swallowing even small amounts can cause serious poisoning. Fortunately, the amount of sodium azide in most rapid antigen kits is much lower than the amount expected to cause poisoning if swallowed by an adult. However, the vials that come with the kits do look like small squeeze bottles or eye droppers. Some people may accidentally confuse them with medications and apply the drops into their eyes or nose, which may cause irritation. People also may spill it on their skin, which can cause skin irritation or chemical burns. Small children may accidentally swallow the contents of the vial or choke on the vial's small cap.

If you suspect someone has swallowed sodium azide, do not make the person vomit. For eye exposures, rinse the eyes for 15–20 minutes with warm tap water. For skin exposures, rinse the skin well with tap water. Immediately check the [webPOISONCONTROL](#)[®] online tool for guidance or call Poison Control at 1-800-222-1222. Both options are free and available 24 hours a day. If someone has swallowed part of a rapid antigen test and is choking, call 911 immediately.

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Medical Toxicologist

This Really Happened

Case #1: An adult couple misunderstood the directions on a home testing kit and put the test kit solution in their nose with the swab. They had mild nasal irritation, which resolved with nasal saline spray.

Case #2: An adult woman mistook the test kit vial from her home COVID test for her antibiotic eye drops and put it in her eye. She developed some irritation and redness in the eye, which resolved after rinsing the eye with water for 10 minutes.

Case #3: A woman got a small amount of sodium azide fluid on her thumb after performing a rapid antigen test at home. Her thumb was tingling, flushed, and mildly swollen. She ran her thumb under water and the symptoms resolved within a couple of hours.

Case #4: A 3-year-old boy grabbed the test kit vial from the counter and put it in his mouth. His mother called Poison Control, and she rinsed his mouth out. The boy developed no symptoms.

Prevention Tips

- > Store rapid antigen test kits away from children and do not open them until they are ready for use.
- > Read the directions for use and follow them carefully.
- > Do not let children handle or play with rapid antigen kits.
- > Dispose of the test kit immediately after use.
- > COVID-19 infection is best prevented through vaccination, wearing masks, hand washing, and maintaining social distancing.

Poisoned?

Call
1-800-222-1222
or

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For More Information

[Human Toxicity from COVID-19 Rapid Home Test Kits](#), article published in AJEM Jan 25, 2022, [Kelly Johnson-Arbor, MD](#), [Nicole Reid, BSN, EdM](#), [Susan Smolinske, PharmD](#)

References

[BinaxNOW COVID-19 Ag Card Home Test. Healthcare Provider Instructions For Use.](#) Accessed January 13, 2022.

[Centers for Disease Control and Prevention. Facts about sodium azide.](#)

[Centers for Disease Control and Prevention. Sodium azide poisoning.](#)

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