

## Poisoning by Hand Sanitizers

The CDC has recommended hand sanitizers as part of their strategy to prevent spread of the COVID-19 pandemic. However, some sanitizers contain high amounts of methanol and some people are drinking the sanitizers to get an alcohol high. Others have believed a rumor, circulated online, that drinking the highly potent and toxic alcohol can disinfect the body, protecting them from COVID-19 infection (1).

Banner Poison and Drug Information Center at Banner University Medical Center in Phoenix alerted the state health department, who brought in the CDC and FDA to investigate. In the CDC's Morbidity and Mortality Weekly Report from Aug. 14, the first 15 cases seen in Arizona and New Mexico were reported (2).

The FDA first alerted consumers about toxic hand sanitizers in mid-June, when the agency warned against the use of hand sanitizer products with methanol made by Eskbiochem. By Aug. 12, that list had grown to 160 brands. Prominent amongst these has been sanitizers manufactured by Global SAPI de CV from Mexico and sold under the name Blumen (3)

Besides methanol, the FDA warns, some hand sanitizers contain insufficient levels of ethyl alcohol or isopropyl alcohol, the acceptable active ingredients for hand sanitizers. In some cases, the companies with methanol in their products have voluntarily recalled them, following the FDA's recommendation. For others, the FDA has issued an import alert to stop the product from entering the country. While some hand sanitizers are marked "FDA approved," the FDA says that is a fraudulent claim, as there are none approved by the FDA.

Methanol, also called wood alcohol, can be toxic when ingested or very rarely when absorbed through the skin. Early clinical effects of methanol and ethanol poisoning are similar (e.g., headache, blurred vision, nausea, vomiting, abdominal pain, loss of coordination, and decreased level of consciousness), but persons with methanol poisoning might develop severe anion-gap metabolic acidosis, seizures, and blindness. If left untreated methanol poisoning can be fatal (5). Survivors of methanol poisoning might have permanent visual impairment, including complete vision loss; data suggest that vision loss results from the direct toxic effect of formate, a toxic anion metabolite of methanol, on the optic nerve (3).

The 15 adult patients with reported methanol poisoning including persons who were American Indian/Alaska Native (AI/AN). All had ingested an alcohol-based hand sanitizer and were subsequently admitted to a hospital. Four patients died and three were discharged with vision impairment. Persons should never ingest alcohol-based hand sanitizer, avoid use of specific imported products found to contain methanol, and continue to monitor FDA guidance (3). Clinicians should maintain a high index of suspicion for methanol poisoning when evaluating adult or pediatric patients with reported swallowing of an alcohol-based hand sanitizer product or with symptoms, signs, and laboratory findings (e.g., elevated anion-gap metabolic acidosis) compatible

with methanol poisoning. Treatment of methanol poisoning includes supportive care, correction of acidosis, administration of an alcohol dehydrogenase inhibitor (e.g., fomepizole), and frequently, hemodialysis.

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### **References**

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2. Yip L, Bixler D, Brooks DE, et al. Serious Adverse Health Events, Including Death, Associated with Ingesting Alcohol-Based Hand Sanitizers Containing Methanol - Arizona and New Mexico, May-June 2020. MMWR Morb Mortal Wkly Rep. 2020;69(32):1070-1073. Published 2020 Aug 14. [[CrossRef](#)] [[PubMed](#)]
3. FDA. FDA updates on hand sanitizers consumers should not use. Current as of 8/18/20. Available at: <https://www.fda.gov/drugs/drug-safety-and-availability/fda-updates-hand-sanitizers-consumers-should-not-use> (accessed 8/18/20).