Boulder County Public Health

Dec 30, 2022

Information on health risk due to recent detection of methamphetamine residue at the Boulder Public Library Main Branch

The City of Boulder recently tested the restrooms and other public spaces at the Boulder Public Main Library for methamphetamine (meth) residue, based on reports from staff of suspected meth use in recent weeks. This document is intended to provide the City and the public with information about the relevant regulations and health risk of potential exposure.

Preliminary testing of the library bathrooms indicated levels of residue above the regulatory threshold for required cleaning and remediation. In consultation with Boulder County Public Health (BCPH), the City of Boulder decided to close the library and conduct more testing across a number of locations in the library and on the surrounding property. The test results identified very few additional areas that need cleaning or remediation, and that work has already begun.

According to existing studies, health risks from casual secondary exposure to meth residue (surfaces/smoke) in public places is very low as compared to longer-term exposure in spaces where people live and where methamphetamine is or was manufactured or consumed regularly. This is because meth is metabolized in the body within a few days and then exits the body through urination. When someone continues to smoke or live in a contaminated area, contaminants build up in the body and take longer to expel. At the same time, preventing exposure to any level of meth contamination is recommended, and the state guidelines require remediation at a very low threshold of detection in order to maintain safety and prevent health risks associated with exposure.

State Regulations

Colorado regulations were developed primarily to protect occupants of Methamphetamine-Affected Properties (MAPs) against the risks of exposure, especially where there is a suspicion of meth manufacturing. In these contexts, one would expect significant residue build-up over time, as well as chronic residue exposure for anyone inhabiting the area. Public spaces, like the library, have a much lower chance for concentrated levels of residue to build over time and visitors are exposed episodically rather than chronically. BCPH is mindful of these important contextual factors in applying the state regulations and county ordinance 2019-2 in this case.

Regulations require testing and remediation at the following levels for any space:

- **Screening-level assessments:** Required at properties where there is suspected or known methamphetamine contamination and often performed voluntarily during property transactions. If any samples collected during a screening assessment are higher than 0.2 micrograms/100cm2, a more thorough preliminary assessment must be performed.

- **Preliminary assessments:** Required at properties where there is suspected or known methamphetamine contamination. If any samples from the preliminary assessment show levels above 0.5 micrograms/100cm2, the property must be remediated.

Screening-level and preliminary assessments for methamphetamine contamination must be performed by a state-certified consultant (industrial hygienist). BCPH reviews test results and advises local jurisdictions on the next steps, such as restricting access to a methamphetamine-affected property. Remediating (cleaning) methamphetamine-affected properties must also be performed by a state-certified contractor that is independent from the consultant. Clearance testing is conducted when remediation is complete, and BCPH reviews the results to ensure that the property was remediated in accordance with state standards. If any clearance samples are above the screening limit, remediation must continue until a clearance assessment finds no contamination above the screening limit. Upon successful remediation, BCPH informs the local jurisdiction that access to the property may resume.

What is methamphetamine?
Methamphetamine is a powerful, highly addictive stimulant that affects the central nervous system. Methamphetamine increases the amount of the natural chemical dopamine in the brain. Dopamine is involved in body movement, motivation, and reinforcement of rewarding behaviors. The drug's ability to rapidly release high levels of dopamine in reward areas of the brain strongly reinforces drug-taking behavior, making the user want to repeat the experience.

Methamphetamine can be found in various forms with different appearances. Crystal methamphetamine is a form of the drug that looks like glass fragments or shiny, bluish-white or other colored rocks. People can take methamphetamine by:

- smoking (the most common method)
- swallowing (pill)
- snorting
- injecting the powder that has been dissolved in water/alcohol

Health impacts of secondary exposure to methamphetamines
Secondary exposure to methamphetamine, such as breathing air or touching surfaces where meth has been used, has not been well studied and limited information is available. Although primary exposure to methamphetamines, such as smoking, ingesting, or injecting, is considered unsafe, there is no clear scientific standard for identifying an unhealthy level of secondary meth exposure. Research does show, however, that health risks are more significant after prolonged exposure to high levels of contamination, especially for infants, young children, and people with existing health conditions.

The regulatory contamination levels that dictate assessment and remediation requirements are set at conservative (low) limits to protect human health, given their applicability to residences and other occupied structures. In the context of public settings, where exposure durations are typically much shorter, contamination thresholds are even more conservative in relation to risk.

Secondary exposure to meth smoke. Researchers have not documented that people get high or experience significant health effects due to breathing in secondhand methamphetamine smoke, although exposure to secondhand smoke can cause a person to test positive for methamphetamine.

Exposure to smoke in the vicinity of someone actively smoking meth poses a more significant risk than exposure in an area where meth has previously been smoked. More research is needed in this area.

Secondary exposure to meth-contaminated surfaces. Contaminated surfaces, due to someone who has used meth touching the surface or previously airborne residue that has settled, can expose others through dermal absorption due to skin contact with the contaminated area or through ingestion if hands are then put in mouths without cleaning. The probability of such exposure causing someone to experience symptoms is low, especially in relation to exposure in a public setting.

Because meth is metabolized quickly in the body and expelled within a few days, health risks largely relate to long term, chronic exposures.

If someone experiences a significant level of exposure to meth, they can become ill. In general infants, children, the elderly, and people with compromised immune systems are at a higher risk for complications. However, meth exposure can affect healthy adults too.

Symptoms of meth exposure may include:

- Watery, red, and burning eyes, often accompanied by discharge and pain
- Irritation of the mucus membranes, especially in the nose and throat
- Skin irritations, redness, and rashes
- Chest pain and difficulty breathing
- Abdominal pain and diarrhea
- Chronic sneezing, coughing, and congestion
- Adverse effects on the central nervous system
- Moderate or severe headaches
- Dark-colored urine
- Rapid heart rate
- Yellow jaundice
- Fever
- Impairment in mental capabilities
- Hallucinations

What do I do if I think I've been exposed to meth?

In addition to thoroughly cleaning your body (and clothing if appropriate), you should check with your doctor. Be sure to tell them you believe you may have come into contact with meth. If symptoms are more severe, you may consider visiting an urgent care facility or an emergency room.