

Mercury Exposure from Skin Lightening Products

FACT SHEET FOR HEALTH CARE PROVIDERS

Skin lightening is commonly practiced around the world, with deep roots in colorism that places higher value and privilege of light-skinned people over dark-skinned people. Skin lightening products can contain high levels of mercury, as well as steroids and hydroquinone. Exposure to these chemicals can cause a range of health outcomes. In addition to identifying patients who may be having elevated mercury exposure, it is important to address the social stigma that comes with darker skin and encourage everyone to love their skin.

Who is at risk?

People use skin lightening products for a variety of reasons, including skin bleaching/whitening, melasma, age or sunspot reduction, acne treatment, morphea, and dysmorphia.

- Anyone using skin lightening products is at risk of mercury exposure. Because of the pressures of colorism people from some cultural backgrounds are more likely to use these products.
- Other people living in homes where these products are used can also be exposed.
- Some groups are at greater risk for health effects from exposure, including pregnant people and developing fetuses, infants, and young children.

How are people exposed?

Skin lightening products come in different forms, including creams, powders, and soaps. People can be exposed to mercury from dermal (skin) contact, inhalation (breathing in), and ingestion (eating or drinking).

- Skin contact from using the product on their skin or touching household items (towels, clothing, bedding) that have been contaminated.
- Breathing in mercury vapors that products give off, which get into the household air.
- Accidentally swallowing or eating the skin lightening products.

Health effects of exposure to mercury

The form of mercury commonly found in skin lightening products is inorganic mercury. Exposure to this form of mercury can cause:

- Rash and other dermatological problems.
- Kidney damage, including edema, uremia (due to tubular and glomerular renal injury), and nephrotic syndrome.
- Neurological effects, including paresthesia, anxiety, irritability, tremors, memory loss, depression, weight loss, and fatigue.

Recommendations for health care providers

- Ask patients if they are using skin lightening products because of medical or cultural reasons and include their responses in patient history. However, be aware that potentially exposed patients may not answer yes because it can be difficult to identify suspect products and because there is a stigma about using the products.
- Share health education messaging and materials about mercury in skin lightening products with patients. MDH has short factsheets in multiple languages (English, Somali, Spanish, Hmong, Karen, Oromo, Amharic, and Tigrinya) that can be found at [Skin Lightening Products can cause Health Problems](https://www.health.state.mn.us/communities/environment/skin/gpfs.html) (<https://www.health.state.mn.us/communities/environment/skin/gpfs.html>).
- If you are concerned that a patient may be having mercury exposure from skin lightening, consider a urine mercury test (see next section).
- Consider inorganic mercury exposure from skin lightening products when conducting workups for differential diagnoses of renal, dermatologic, and neurological diseases.
- Contact Minnesota Poison Control at 800-222-1222 with any questions about clinical management of acute exposures, in particular acute symptomatic exposures. You can also contact MDH at 651-201-4899 or health.risk@state.mn.us with any questions about evaluating mercury exposure, whether to obtain urine mercury tests, or schedule home visits.

Testing for inorganic mercury exposure

- **Urine mercury testing** is recommended by MDH to assess whether an individual has been recently exposed to inorganic mercury.
 - **Action levels:** Typical urine mercury levels should be <5 micrograms/liter (mcg/L). Anything higher indicates likely exposure to inorganic mercury. At levels ≥ 5 mcg/L, symptoms may be present, and MDH recommends that a home visit be offered for source control. At levels greater than 100 mcg/L, acute health effects are possible, and a toxicologist should be consulted as soon as possible through Minnesota Poison Control.
 - **A urine re-test** should be ordered after 60 days to determine whether source control was effective. Inorganic mercury has a half-life of 60 days.
- Total urine mercury typically reflects inorganic and elemental mercury exposure. In contrast, total blood mercury typically reflects dietary intake of organic mercury, particularly from eating fish.

How should I treat inorganic mercury poisoning?

- Removing the source of exposure is the most effective treatment.

- Contact Minnesota Poison Control or other medical toxicologist if the poisoning is severe and chelation is being considered. Chelation treatment of asymptomatic or mildly symptomatic patients is unlikely to benefit patients and may be harmful.

Recommendations for patients using skin lightening products

- Ask the patient to stop using skin lightening products.
- Tell the patient to not throw products in the trash or dispose in the toilet or sink. If the product has mercury in it, it can harm others if it gets into the environment. Ask the patient to take the product to a household hazardous waste site. They can check their county website to find a site for safe disposal.
- Visit [Skin Lightening Products Found to Contain Mercury, Hydroquinone and/or Steroids \(PDF\)](#) (<https://www.health.state.mn.us/communities/environment/skin/docs/testedprds.pdf>) to see if the product they are using is listed. If you have concerns, contact MDH at 651-201-4899 or health.risk@state.mn.us.
- If they have concerns about their skin, consider advising the patient to see a dermatologist.

Where can I obtain more information?

- More information about household hazardous waste can be found at Minnesota Pollution Control Agency website: [Safely dispose of household hazardous waste](#) (<https://www.pca.state.mn.us/news-and-stories/safely-dispose-of-household-hazardous-waste>).
- For questions about evaluating, testing, and treating for mercury exposure, contact Minnesota Poison Control at 1-800-222-1222.
- For general questions, contact the Minnesota Department of Health at 651-201-4899 or health.risk@state.mn.us.

Minnesota Department of Health
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