

Mercury exposure from skin lightening products

FACT SHEET FOR HEALTH CARE PROVIDERS | JANUARY 2020

Minnesota Department of Health tested a random sample of skin lightening products sold in Twin Cities stores in 2011: 11 out of 27 (41%) contained excessive levels of inorganic mercury (ranging from 135-33,000 ppm).

Who is at risk?

- Patients using skin lightening products because of cultural or medical reasons

People use skin lightening products for a variety of reasons including skin bleaching, melasma, age or sun spot reduction, morphea, dysmorphia and other medical/personal reasons.

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. It is important to address the social stigma that comes with darker skin and encourage everyone to love their skin.

How are people exposed?

- Inhalation of mercury vapors
- Dermal absorption
- Ingestion

Examples of skin lightening products include creams, powders, soaps and similar products. Use of a product containing mercury exposes everyone in the home to mercury vapor in the air. Mercury can also be spread through household items (towels, clothing) that come into contact with the skin lightening products.

Signs and symptoms of exposure to inorganic mercury:

- Rash
- Hypertension, edema, uremia (due to tubular and glomerular renal injury), nephrotic syndrome
- Paresthesia, anxiety, irritability, tremors, memory loss, depression, weight loss, fatigue

Recommendations for health care providers:

- Ask patients who may be at risk for using skin lightening products because of medical or cultural reason about these products and include questions in patient history. Mercury (or other chemicals such as hydroquinone or steroids) may be the active ingredient in these products.
- Consider inorganic mercury exposure from skin lightening products when conducting workup for differential diagnoses of renal, dermatologic and neurological diseases.
- Contact Minnesota Poison Control with any questions about evaluating for mercury exposure or whether to obtain urine mercury levels.

Recommendations for patients using skin lightening products

- Stop using the product now. If you have been using a product with mercury in it, your body will naturally get rid of the mercury over time.
- Do not throw the product in the trash or dispose of it in the toilet or sink. If it has mercury in it, it can harm others if it gets into the environment.
- Take the product to a household hazardous waste site. You can find the nearest site in the phone book or on the website of the Minnesota Pollution Control Agency at www.pca.state.mn.us (search for household hazardous waste).
- If you have concerns about your skin, see a dermatologist.

Testing for inorganic mercury exposure

- Screening for inorganic mercury is completed through urine collection, ideally collected with use of a preservative.
- In the general population, normal urine mercury levels should be <5 micrograms/liter. Anything higher indicates likely exposure to inorganic mercury. At levels >25 mcg/L, symptoms may be present though are unlikely, and a toxicologist or environmental specialist should be consulted. At levels >100 mcg/L, acute health effects are possible, and a toxicologist should be consulted as soon as possible through Minnesota Poison Control.

How should I treat inorganic mercury poisoning?

- Removing the source of exposure is the most effective treatment.
- Some patients may require supportive care.
- Severe mercury poisoning can be treated with chelation after careful assessment of risk/benefit. Chelation treatment of asymptomatic or mildly symptomatic patients is unlikely to benefit patients, and may be harmful. Consultation with a medical toxicologist at Minnesota Poison Control is highly recommended before initiating chelation.

Where can I obtain more information?

- [Skin Lightening Products Found to Contain Mercury \(www.health.state.mn.us/communities/environment/skin/index.html\)](http://www.health.state.mn.us/communities/environment/skin/index.html)
MDH web site with pictures of tested products and patient-friendly, short informational sheets in English, Spanish, Hmong, Somali, Oromo and Karen
- [The MN FEET program: Birth disparities and prenatal mercury exposure \(mppub.com/mp-s1-1019.html\)](http://mppub.com/mp-s1-1019.html)
October 2019 article in Minnesota Physician
- Questions about evaluating, testing, and treating for mercury exposure: Minnesota Poison Control at 1-800-222-1222
- General questions: Minnesota Department of Health at 651-201-4899 or health.risk@state.mn.us