

# Skin-lightening Practices and Chemical Exposures

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## Outline

- Overview of skin-lightening practices worldwide
- Skin-lightening research and results
- Policy changes and regulation
- Recommendations for home visiting staff
- Resources



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## What is skin-lightening?

- Skin-lightening creams & soaps are widely used in USA and other parts of world and mostly used by women and some men
- Used by both dark and light-skinned individuals to lighten skin tone, fade freckles, or get rid of age spots
- Many immigrant/refugee communities in MN practice skin-lightening including Somali, Hmong and Latino



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### Market in Ghana



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### Product Ad in Kenya



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### Research Background

- Identified that many Somali women were using the skin-lightening products
- Presented to the department leadership
- Literature review



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### Somali Women Practice

- Somali women have been using these skin lightening products for more than two decades and they have continued to use after migrated to USA
- Most of Somali women believe having a lighter skin is more socially acceptable and how their beauty is defined



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### Key Informant Interviews

- Conducted with seven Somali women to learn more about the use of the products
- The women indicated that they used skin-lightening to get rid of dark spots from pregnancy and be more attractive to men
- Typical practice was to mix four creams; 3 containing Mercury and the fourth a steroid-based preparation
- Applied three times a day even when pregnant or breastfeeding



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### Samples

- Collected 27 products (creams & soaps)
- These random samples were collected from the Somali mall (Karamel) & Hmong market
- All samples were tested by MPCA, MDH & FDA
- The FDA allows for less than 1 PPM
- 11 out of the 27 samples exceeded the FDA threshold ranging from 4 to 33,000 PPM



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## Results

- samples demonstrated high levels of inorganic mercury (ranging from 4.08-33,000 PPM),
- Table 1. Inorganic Mercury Levels in Skin Lightening Creams:

Inorganic Mercury Products	Levels-Parts Per Million (PPM)
Lemon Herbal Whitening Cream	33,000 ppm
Lulanjina – yellow cream	16,700 ppm
Lulanjina – white cream	12,800 ppm
Crème Diana C.T.R.	6,370 ppm
Qian Mei – white cream	4,650 ppm
Fasco	4,600 ppm
Milk Cream	4,600 ppm
Crème Diana C.T.R.	4,180 PPM
Qian Mei – yellow cream	3,540 ppm
Jiao Li – container 2	1,700 ppm
Jiao Li – container 1	1,070 ppm
Cream Aghader	135 ppm
Savon pour L'acné Diana soap	31 ppm
Savon pour L'acné Diana soap	4.08 ppm




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



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## Mercury Containing Products

**Skin-lightening creams tested that have unsafe levels of mercury**  
(products to have not been tested; others not listed here may also contain toxic levels of mercury)

 Lemon Herbal Whitening Cream 33,000 ppm (jar on left)	 Lulanjina – yellow cream 16,700 ppm (jar on left)
 Crème Diana C.T.R. 6,370 ppm (inside box)	 Lulanjina – white cream 12,800 ppm (jar on left)
 Fasco 4,600 ppm	 Qian Mei – white cream 4,650 ppm
 Crème Diana C.T.R. 4,180 ppm (jar on left) (product on right contained no mercury)	 Milk Cream 4,600 ppm
 Jiao Li – container 2 1,700 ppm (jar on right)	 Qian Mei – yellow cream 3,540 ppm
 Jiao Li – container 1 1,070 ppm (jar on left)	 Cream Aghader 135 ppm
 Savon pour L'acné Diana soap 31 ppm (left box) Savon pour L'acné Diana soap 4.08 ppm (right box)	

Sales Point: Ramsey County Public Health




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## Regulation and Policy Change

- Minnesota banned the sale of mercury contain cosmetics
- MPCA & FDA looked at how the products were getting into the state




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## FDA Policy Change

- March 2012, FDA issued a policy change



**Mercury Poisoning Linked to Skin Products**

Federal health officials are warning consumers not to use skin creams, lotions, and ointments that contain mercury. The products are marketed as skin lighteners, skin bleaches, and are sold in countries such as China, India, and the Philippines. The products are sold in various forms, including creams, lotions, and ointments. The products are sold in various forms, including creams, lotions, and ointments. The products are sold in various forms, including creams, lotions, and ointments.

**Mercury:** Mercury is a naturally occurring element that is found in air, water, and soil. It is a toxic substance that can cause serious health problems, including neurological damage, kidney failure, and developmental delays in children. Mercury is found in many types of fish and shellfish, and it is also found in some types of coal, gold, and silver ores. Mercury is also found in some types of industrial waste and in some types of consumer products, such as skin lightening products.

**Topical Steroids:** Topical steroids (Hydroquinone & corticosteroids) are anti-inflammatory agents used by doctors to treat many skin diseases such as eczema and dermatitis. Topical steroids such as Dermovate and Movate are extremely potent, and should only be used by prescription and under a doctor's supervision.

**These skin creams manufactured in other countries are among the products found to contain mercury.**

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## Dangerous Chemicals in Skin-lightening Products

- Mercury:**
  - Is naturally occurring elements that found in air, water and soil
- Topical Steroids:**
  - Topical steroids (Hydroquinone & corticosteroids) are anti-inflammatory agents used by doctors to treat many skin diseases such as eczema and dermatitis
  - Topical steroids such as Dermovate and Movate are extremely potent, and should only be used by prescription and under a doctor's supervision

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	clobetazol propionate	betamethasone
	Butavate	Alphatrex
	Clobex	Beta-Val
	Cosvate	Diprolene
	Dermatovate	Diprolene AF
	Dermovate *	Diprosone
	Lemonvate *	Hot Movate Gel
	Movate *	Luxiq
	Novate	
	Olux	
	Temovate	
	Tenovate	



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## Types of Mercury Exposure

<b>Elemental Mercury</b>	"Quicksilver" used in gold mining with exposure through inhalation
<b>Organic Mercury</b>	Coal burning power plants with contamination of water. Consumption by fish with bio-concentration in food chain
<b>Inorganic Mercury (salts)</b>	Skin Lightening Creams & Lotions through

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## Health Effects

### Inorganic mercury exposure:

- Skin discoloration, scarring, secondary bacterial and fungal infection, renal impairment and damage to the nervous system
- Pregnant women and women of child-bearing age should avoid exposure to mercury. Unborn babies, infants, and children are very sensitive to mercury
- Prenatal exposure to mercury may cause neurological effects in children. Also in some cases mercury can cause birth defects




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## Health Effect Cont.

### • Hydroquinone exposure:

- Increases UV radiation
- Sensitive to sunlight
- Carcinogenic effects




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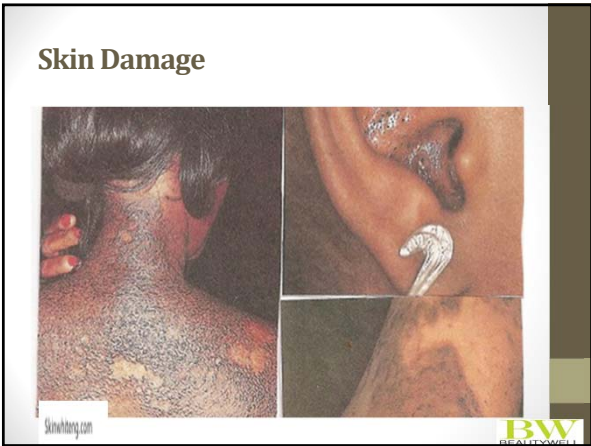
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### Recommendations-Individuals

- If you have been using products that may have mercury in it, stop using it now. The body will naturally get rid of the mercury
- Consult with your dermatologist for skin care
- Do not throw the product in the trash. If it has mercury in it, it can harm others if it gets into the environment

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### Recommendations - Home Visiting Staff

- Include questions about skin-lightening cream use in client intake form
- Ask and check any cosmetic products the family is using
- Discuss skin-lightening products use with patient. Mercury or other regulated chemicals
- Advise patient to safely dispose the products
- For symptomatic clients/patients, contact the Regional Poison Center at 1-800-222-1222 for consultation with a toxicologist

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### Recommendation-Engagement

- First develop trusted-relationship with the family
- Do not ask the client directly the use of skin-lightening products, start the conversation asking the type of cosmetic products they are using
- There is stigma attached to skin-lightening practices and so some individuals may not share
- Focus on the public health and educate them the negative health impact
- Share self-care tips and culturally sensitive resources

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### MN Family Environmental Exposure Tracking (MN FEET)



- MDH study to test for mercury, lead and cadmium in women and their babies
- Biomonitoring in newborns from communities at higher risk for exposure
  - Somali, Hmong and Latino
- Conducted by MN Biomonitoring Partnership i.e., MDH, HealthPartners, SoLaHmo Partnership for Health & Wellness & West Side Community Health Services



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### Resources

- Adawe A & Oberg CN: Skin-lightening practices and mercury exposure in the Somali community. *MN, Med*, 2013; 6:48
- Al-Saleh I: Potential health consequences of applying mercury-containing skin-lightening creams during pregnancy and lactation periods. *IJHEH*. 2016,3:1
- MN FEET, Minnesota Department of Health @ <http://www.health.state.mn.us/mnfeet>
- 2015 Skin Lighteners-Global Strategic Business Report @ [www.researchandmarkets.com/reports/1056077](http://www.researchandmarkets.com/reports/1056077)
- Saint Paul-Ramsey County Public Health (Skinlightening Cream): <https://www.ramseycounty.us/residents/health-medical/healthy-homes/skin-lightening-cream>

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Thank You

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