The HERMOSA Study:
Reducing Latina girls’ exposure to endocrine disrupting chemicals in cosmetics

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**HERMOSA Study Aims**

1) To characterize levels and sources of ED exposure from personal care products in young Latina women

2) To lower ED concentrations in the body by using alternate products

3) To empower local youth in scientific research methods

4) To work with local youth to develop health education and advocacy skills
The CHAMACOS Youth Council

Preparing the next generation of Environmental Health Leaders
Learning about Endocrine Disruptors

The Campaign for Safe Cosmetics

THE STORY OF COSMETICS

WITH ANNIE LEONARD

THE UGLY TRUTH OF "TOXICS IN, TOXICS OUT"
Endocrine Disruptors in Make-up

- Phthalates (fragrance)
- Parabens (preservative)
- Oxybenzone (sunscreen)
- Triclosan (antibacterial)
HERMOSA Study

- Enrolled 100 teen girls
- Pre-intervention visit:
  - Questionnaire about recent beauty product use
  - Urine sample
  - Education about EDs in make-up
- Gave low chemical products for 3 days
- Post-intervention visit:
  - Urine sample
The “Beauty Bar”

Girls Received:
• Shampoo
• Conditioner
• Body wash
• Liquid soap
• Lotion
• 1 Bar hand soap
• Deodorant
• Toothpaste (only for Colgate Total users)

Plus 4 extras from choice of: Liquid foundation, Powder foundation, Mascara, Eye liner, Lip stick, Lip gloss, Lip balm, Sunscreen
“Low Chemical” Alternatives

- Parabens, triclosan, oxybenzone:
  ✓ Based on ingredients list

- Phthalates:
  ✓ Not listed on ingredients
  ✓ Chose brands that pledged not to use phthalates
  ✓ Chose options with no fragrance or parfum

- Prioritized locally available, affordable products. Prioritized brands that used fewer chemicals across the board.

We did not conduct independent tests for the presence of these chemicals
Designing the Study
Devising a Name and Logo

**HEALTH AND ENVIRONMENTAL RESEARCH ON MAKE-UP OF SALINAS ADOLESCENTS**
Testing Alternate Products
Conducting the Data Collection
Recruiting & Interviewing

HERMOSA STUDY
Health and Environmental Research on Make-up Of Salinas Adolescents

Are you a teen girl in Salinas?
Are you interested in learning about the chemicals in your personal care products?
Are you interested in earning $100?

If you answered "Yes!" call or text us at (831) 419-8610 or email us at hermosastudy@gmail.com to learn how you can join the Hermosa Study.
Analyzing the Data

Field Trip to the CA Department of Public Health Laboratories
Results
HERMOSA Participants

- Mexican or Mexican-American
- Most spoke Spanish at home and English with friends
Percent of Participants with Detectable Analyte Concentrations

- Triclosan
- BP3
- BP
- MP
- EP
- PP
- MEP
- MBP
- MiBP

Percent > LOD

Parabens

Phthalates
Higher Urinary Levels were Associated with Use of Specific Products

Triclosan:
  • Colgate Total toothpaste
  • Liquid hand soap

Oxybenzone:
  • Sunscreen

Harley et al, in prep.
Higher Urinary Levels were Associated with Use of Specific Products

Phthalates:
  • Moisturizer
  • NOT perfume or fragrance

Parabens:
  • Make-up use
  • Foundation, blush, mascara

Harley et al, in prep.
Did Levels Go Down During the Intervention?
Triclosan Levels: Pre and Post-intervention

36% decrease

Triclosan

Harley et al, EHP, 2016
Oxybenzone Levels: Pre and Post-intervention

Harley et al, EHP, 2016
Phthalate Levels: Pre and Post-intervention

Harley et al, EHP, 2016
Paraben Concentrations: Pre and Post-intervention

Harley et al, EHP, 2016
Urinary Concentrations of Other Phthalates and Phenols did not Change

<table>
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<tr>
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<th>Pre-intervention GM (ng/ml)</th>
<th>Post-intervention GM (ng/ml)</th>
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Harley et al, EHP, 2016
Participant’s Attitudes

Learned something new about chemicals in cosmetics 86%
Has checked ingredient list of cosmetics 30%
Will buy beauty products without EDs 93%

Harley et al, EHP, 2016
Returning Results to Study Participants

Phthalate Levels

- Phthalates are often listed on ingredient lists as “fragrance” or “parfum.”
- They are commonly found in perfume, lotions, shampoo, nail polish, and other cosmetics.
- In HERMOSA, girls who used lotion more often had higher phthalate levels.
- On average, phthalate levels went down during the HERMOSA intervention.

Summary:
Before the intervention, your phthalate levels were about the same as most U.S. girls, and were about the same as the pre-intervention levels for most HERMOSA girls.

After using the low chemical personal care products for three days, your phthalate levels were about the same as most U.S. girls, and were about the same as the post-intervention level for most HERMOSA girls.

Your personal phthalate levels were 32% lower post-intervention than pre-intervention.
Advocacy and Outreach Activities

Educational Materials

DIY Shampoo =

You will need:
2 tablespoons olive oil
1 egg
1 tablespoon lemon juice
1 teaspoon apple cider vinegar

Instructions: Combine all ingredients in a blender. Blend until well combined. Use like regular shampoo. Discard any leftovers.

Social Media

Twitter @ hermosa_study
Instagram @ hermosa_study
Facebook: Teens For Safe Cosmetics

Community Events
HERMOSA Study Summary

- Identified products that were highest contributors to ED exposure
- Reduced ED concentrations by 25-45% by switching products for 3 days
- Low chemical products help!
- Able to empower youth by training them to be scientific researchers, health educators, advocates.
Thanks to our Staff and Collaborators
And thanks to our Funder

Community Research Collaborative Award 18BB-1800