

BIOMONITORING CALIFORNIA Program Update

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Biomonitoring California
Scientific Guidance Panel Meeting
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Program Updates

- 1) Funding
- 2) Staffing
- 3) Pilot Projects:
 - Maternal Infant Environmental Exposures Project
 - Firefighter Occupational Exposures Project
 - Biomonitoring Exposures Study
- 4) Public Involvement Plan
- 5) Strategic Planning
- 6) Additional Activities

Funding

- Toxic Substances Control Account (TSCA)
 - Funding maintained for 2010-2011 at \$1.9 million
- CDC Cooperative Agreement
 - Renewed for 2010-2011 at \$2.6 million
 - Application for 2011-2012 funds under review

Staffing Changes

- Administrative Assistant—Nancy Lopez
- Vacancies:
 - Two Research Scientists
 - One Research Scientist Supervisor
- Departure of Fogarty Scholar
- Nine summer interns

Maternal and Infant Environmental Exposure Project (MIEEP)



MIEEP: Enrollment Completed!

- 92 Participants
- Biological samples received
 - Urine
 - Whole blood
 - Serum
- Questionnaires
 - Interviewer-administered (clinic)
 - Self-administered (home)

Blood metals
analyses complete
😊

Whole blood and
serum not collected
for all mothers

Some maternal
samples do have
matching cord blood
and serum



What's Next for MIEEP?

- Complete biological sample analyses
- Enter and analyze questionnaire data
- Report back individual results
 - Complete chemical-specific materials in collaboration with UC Berkeley and UCSF
 - Report back to participants
- Publicly disseminate findings
 - SGP meetings, peer-reviewed publications

Mercury Exposure Identified

- Elevated blood mercury detected
 - One mother-infant pair
 - Over twice the level that triggers early notification¹
- Follow-up investigation with UCSF staff, county health department, and US EPA
- Source of mercury identified as face cream
- Health Alert developed following prior CDPH investigation disseminated to clinics
- Other follow up actions being considered

¹The early notification level is 5.8 µg/Liter, and is based on the level set by CDC for pregnant women.



WARNING: Mercury in Home Made Face Creams

In the past few months, several people in California were found to have mercury poisoning. All of these people had used a home made face cream made in Mexico. The face creams came in jars without labels and were used to:

- make their skin a lighter color
- fade age spots and freckles
- get rid of acne

These face creams can harm your health and the health of your children. If you have an unlabeled jar of face cream, **stop using it immediately**. Also, do not use any face cream if the label says: "mercury", "mercurio", "calomel", or another chemical with mercury, such as "mercurous chloride".

How can mercury in face cream affect my health?

Mercury is a poison. Mercury in face cream can get into your body through your skin. The mercury can harm your brain, nerves, and kidneys. Mercury in your body may cause:

- Headaches, memory loss, difficulty concentrating, irritability (bad moods), nervousness, or depression
- Tremors (shaking) or weakness
- Tingling or numbness in hands and feet, and around the lips
- Fatigue (being very tired)
- Swollen or bleeding gums
- Painful and red fingertips



Examples of home made face cream jars from Mexico.

If you think the face cream might have made you or your children sick, contact your doctor or health clinic or call the California Poison Control System for advice at 1-800-222-1222.

Can these face creams harm my children?

Mercury can harm how a child grows and learns, especially in infants, young children, and the fetus. Mercury in a pregnant woman's body can be passed to her baby. Mercury can also pass from a mother to nursing babies when they breast feed. Children can get mercury in their bodies when they are touched by family members who use home made face creams. Teens that use face creams with mercury to treat acne can also get poisoned.

What should I do with unlabeled face creams?

Do not throw unlabeled home made face creams in the trash. Take unused home made face creams to a household hazardous waste collection site. For more information in English or Spanish, or to find a hazardous waste collection site in your community, call the Poison Control Center at 1-800-222-1222.

Where do these face creams come from?

People buy the face creams in Mexico and then bring them to the US. Some of these creams have been sold to people in Spanish-speaking communities in the US. So far, all of the face creams found in California were in small plastic jars without labels (see photo). Face creams that have mercury can also be ordered by phone and mailed to the US from Mexico or possibly other countries. It is illegal to sell these products in the United States.

May 2010



ADVERTENCIA: Envenenamiento por Cremas Caseras Para la Cara Hechas en México

En los últimos meses, un gran número de personas fueron detectadas con envenenamiento de mercurio. Estas personas reportaron haber usado cremas para la cara (cremas faciales) hechas en México. Las cremas vienen en envases sin etiquetas y las usan para:

- aclarar la piel
- desmanchar las pecas y manchas oscuras
- hacer desaparecer el acné

Estas cremas para la cara pueden dañar su salud y la salud de sus niños/as. Si usted tiene una crema para la cara en un envase sin etiqueta, **deje de usarla inmediatamente**. También, no utilice ninguna crema facial que en la etiqueta se mencione: "mercurio" o "mercury", "calomel", u otro químico que contenga mercurio, como el "Mercurous Chloride".

¿Como puede afectar a mi salud el mercurio que se encuentra en las cremas para la cara?

El mercurio es un veneno. El mercurio en las cremas faciales puede entrar a su cuerpo por medio de la piel. El mercurio daña su cerebro, sistema nervioso y riñones. El mercurio en su cuerpo puede causarle:

- Dolores de cabeza, pérdida de memoria, dificultad en concentración, irritación (mal humor), nerviosismo o depresión.
- Temblores y debilidad
- Sensación de hormigueo o entumecimiento en las manos y los pies y alrededor de los labios
- Fatiga (sentirse cansado)
- Encías hinchadas o sangrantes
- Punta de los dedos rojos y dolorosos



Ejemplos de envases de crema para la cara hechos en México

Si usted piensa que la crema para la cara le esta afectando su salud a usted o a sus hijos/as, llame inmediatamente a su doctor o clínica comunitaria o a la Línea de Acción para Intoxicaciones y Envenenamientos de California al 1-800-222-1222.

¿Pueden estas cremas para la cara dañar a mis niños/as?

El mercurio puede afectar el crecimiento y aprendizaje del niño, especialmente en bebés, niños, y fetos. El mercurio en el cuerpo de la mujer embarazada puede ser transmitido al bebé. La mamá puede pasar el mercurio al bebé a través de la leche materna. Los niños pueden envenenarse con mercurio cuando son tocados por familiares que usan estas cremas. También, los adolescentes que utilizan estas cremas con mercurio para tratar el acné pueden dañar su salud.

¿Que es lo que debo hacer con cremas para la cara que no tengan etiquetas?

No tire a la basura las cremas para la cara que no tengan etiqueta. Lleve el envase y lo que reste de la crema a un centro de colección para residuos de productos de casa peligrosos. Para más información en Inglés y Español, o para encontrar un centro de residuos para productos peligrosos en su comunidad, llame a la Línea de Acción para Intoxicaciones y Envenenamientos de California al 1-800-222-1222.

¿De donde provienen estas cremas para la cara?

Las personas compran estas cremas faciales en México y luego las traen a los Estados Unidos. Algunas de estas cremas han sido vendidas en comunidades hispano-parlantes en los Estados Unidos. Las cremas faciales encontradas en California están en envases pequeños sin etiquetas (ver la foto). Estas cremas contienen mercurio y pueden también ser pedidos por medio de llamadas telefónicas a México o posiblemente a otros países, y ser enviadas por correo a los Estados Unidos. Es ilegal vender estos productos en los Estados Unidos.

May 2010

Firefighter Occupational Exposures (FOX)



FOX Update

- Laboratory analyses completed (N=101):
 - Metals
 - Perfluorinated chemicals (PFCs)
- Dust sample collection*
 - 27 samples from 20 fire stations
 - Analyses to include:
 - Polybrominated diphenyl ethers (PBDEs)
 - Polychlorinated biphenyls (PCBs)
 - Polycyclic aromatic hydrocarbons (PAHs)

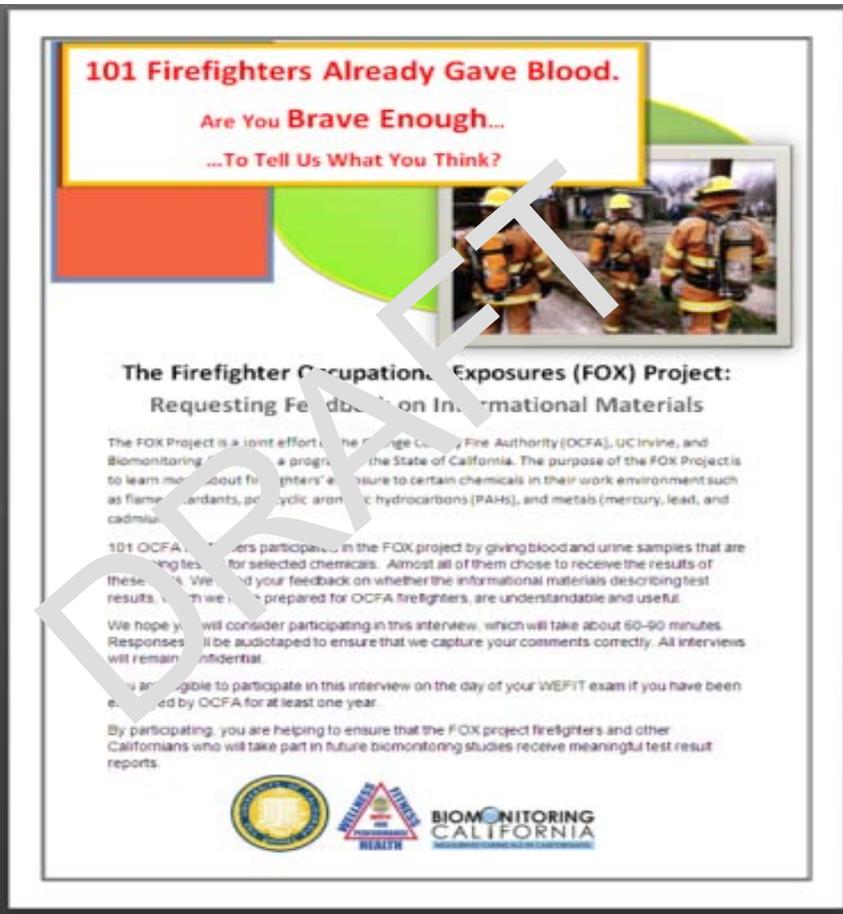
*Funding source not related to Biomonitoring California

What's Next for FOX?

- Complete biological sample analyses
- Analyze questionnaire data
- Conduct usability testing for results return
- Report results
 - Participants: individual results
 - Orange County Fire Authority (OCFA): aggregate results
- Publicly disseminate findings
 - SGP meetings
 - Report, peer-reviewed publications

FOX Usability Testing (UT)

- Report back materials will be tested in August with OCFA firefighters
- FOX UT documents:
 - Completed internal development and review
 - IRB approval pending



101 Firefighters Already Gave Blood.
Are You Brave Enough...
...To Tell Us What You Think?

**The Firefighter Occupational Exposures (FOX) Project:
Requesting Feedback on Informational Materials**

The FOX Project is a joint effort of the Orange County Fire Authority (OCFA), UC Irvine, and Biomonitoring California, a program of the State of California. The purpose of the FOX Project is to learn more about firefighters' exposure to certain chemicals in their work environment such as flame retardants, polycyclic aromatic hydrocarbons (PAHs), and metals (mercury, lead, and cadmium).

101 OCFA firefighters participated in the FOX project by giving blood and urine samples that are being tested for selected chemicals. Almost all of them chose to receive the results of these tests. We need your feedback on whether the informational materials describing test results, which we have prepared for OCFA firefighters, are understandable and useful.

We hope you will consider participating in this interview, which will take about 60-90 minutes. Responses will be audiotaped to ensure that we capture your comments correctly. All interviews will remain confidential.

You are eligible to participate in this interview on the day of your WEFIT exam if you have been employed by OCFA for at least one year.

By participating, you are helping to ensure that the FOX project firefighters and other Californians who will take part in future biomonitoring studies receive meaningful test result reports.



FOX Lessons Learned



Consent Form

- Participants did not want to read form
- Format not user-friendly
- Very long due to required components
- Participants needed to be coached through form

Suggestions for Improvement

- Consent form should be reader-friendly
 - More white space
 - Larger fonts and/or bulleted text

Suggestions for Improvement

- Consent form should be reader-friendly
 - More white space
 - Larger fonts and/or bulleted text
- Provide training and oversight for clinic staff
 - Face-to-face or video training preferred
 - Early site visit to observe protocols in action
 - Provide a hotline for clinical staff
 - Include time and resources for practice

Building on FOX Success

- SGP and public comment encouraged additional firefighter biomonitoring studies
- Under consideration
 - Collaboration with San Francisco Fire Department
 - Additional sampling
 - Area samples
 - Personal air monitors
 - Incident-based biomonitoring

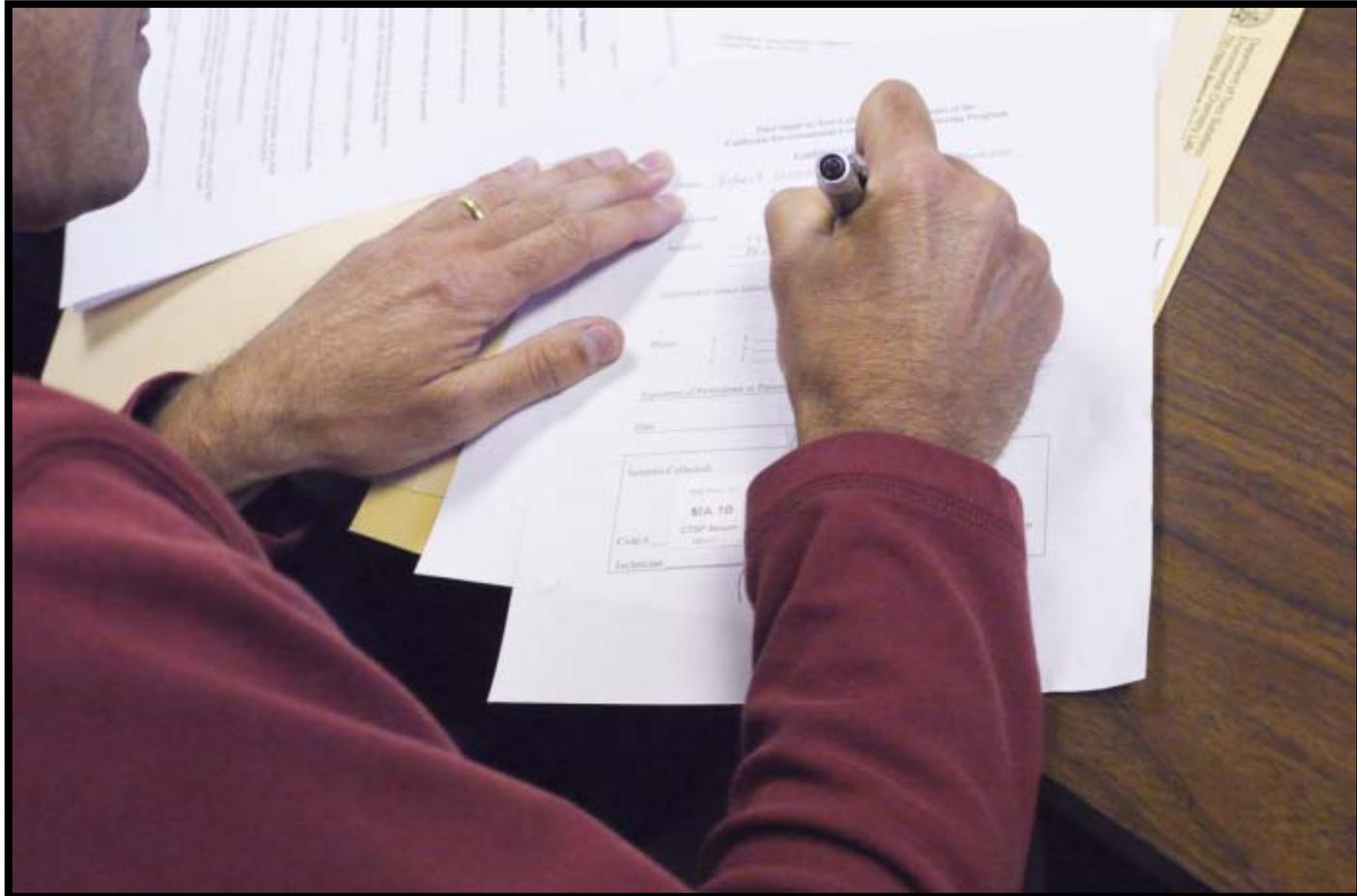


Additional Occupational Cohorts



- We are exploring the possibility of future collaboration with the California Healthy Nail Salon Collaborative

Biomonitoring Exposures Study (BEST)



A collaboration with Kaiser Permanente Division of Research – Research Program on Genes, Environment, and Health (RPGEH)

BEST Participants

- 100 participants
- Stratified random sample of KPNC population in Central Valley counties
 - Fresno
 - Madera
 - Merced
 - Sacramento
 - San Joaquin
 - Stanislaus
 - Yolo



BEST Update

- Phlebotomist hired and trained in June
- Staff at Kaiser labs trained on Biomonitoring California protocols
- Recruitment
 - Letters mailed
 - Field visits to begin in July
 - Biological sample collection, questionnaire administration
 - “Slow start,” first ten participants



BEST – Responses to SGP Questions

Eligibility Criteria:

Q: Will BEST include Spanish-speaking participants?

A: *Not now. This is a possibility that we are exploring for future collaborations.*

Q: Will BEST exclude people who are already part of the RPGEH database?

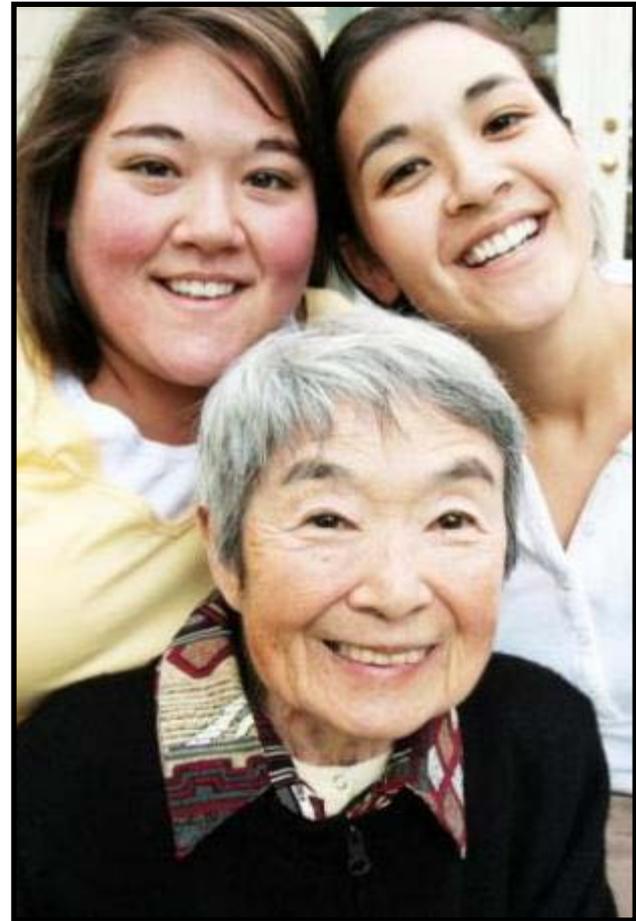
A: *No. Invited participants will be randomly selected from the KPNC membership – thus they could already be in the RPGEH database.*

BEST – Responses to SGP Questions

Sampling Plan

Q: The stratified random sample is by 18-55 years old and over 55 years old. Why is 55 the cutoff?

A: *The age cutpoint of 55 years was an arbitrary choice to separate the adult population into “younger” and “older” aged groups.*



BEST – Responses to SGP Questions

Home Visits

Q: Home visits for sample collection will be costly.

A: *Using the Kaiser laboratory order system for sample collection at a Kaiser facility is a possibility that we are exploring for future collaborations.*

Q: Will the home visit allow for environmental assessments or sampling?

A: *Not at this time. This would require additional funds and modification of the existing protocol.*

BEST – Responses to SGP Questions

Specimen Quality Control

Q: Are there quality concerns with shipping urine samples overnight?

A: *Environmental Health Laboratory has reviewed the literature and sample integrity studies. After sample collection, the BEST samples will be stored and shipped on ice pack for up to 24 hours.*

Public Involvement (PI) Plan Update

Revisions to the PI Plan reflect:

- Specific suggestions made by the Panel and the public on draft Plan
- Updates to capture current preparations for reporting results to FOX participants
- Findings from the March 2011 workshop on understanding and interpreting results

Strategic Planning

- Program-wide meeting in April 2011
 - Development of shared vision, long-term plan
 - Considered input from March 2011 SGP meeting
- Monthly meetings between program leads
 - Options for sustainability
 - Criteria for future projects
 - Improving operability, tracking work and achievements
- Quarterly calls with other CDC-funded biomonitoring states: New York, Washington

Additional Ongoing Activities

- Second Report to the Legislature due Jan 2012
 - SGP provided recommendations in 2010
- CDC Annual Report
- National Biomonitoring System Guidelines
 - Nearing completion
 - Collaborating organizations:
 - Association of Public Health Laboratories
 - Association of State and Territorial Health Officials
 - Council of State and Territorial Epidemiologists

Thank you for your contributions!

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Questions?

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