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SCEHSC Newsletter:

The goal of our Center is to improve health by investigating environmental exposures, addressing risks from these exposures, studying who might be most susceptible, and linking our research efforts with the communities we serve.

Our Center has scientists from USC and UCLA who study cancer, respiratory disease and adverse reproductive outcomes. Some of our recent research findings by our Southern California Environmental Health Sciences Center (SCEHSC) scientists show links between health problems and living close to freeways and busy roads. See links to recent studies: Gauderman, Traffic and Lung Function, McConnell, Asthma and Highway Proximity, Gauderman, Traffic and Asthma. The closer to a freeway or busy road a child lives, the more significant is the risk. The direction the wind blows also plays a role in the levels of pollutants in the air.

Center scientists are also involved in “exposure assessment” studies of traffic – in this case, investigating the levels of pollution at varying conditions and distances from freeways. This work is done in collaboration with the Southern California Particle Center (SCPCS), based at UCLA and directed by Dr. John Froines. Dr. Froines is also Associate Director of the SCEHSC.

In one often-cited traffic study, investigators looked at daytime traffic on the I-405 (San Diego) Freeway in Westwood near the V.A. Cemetery. Link to Press Release. That study, by Drs. Yifang Zhu, Costas Sioutas and Center member Dr. William Hinds, found that the levels of ultrafine (very tiny) particles are high in close proximity to the freeway and then drop off to background levels at about 300 meters from the freeway. More.
scientists also develop new methods for designing studies and evaluating exposures.

We hope that our newsletters will help you learn more about our research efforts and community outreach and education activities.

Dr. Frank Gilliland
Center Director

Save-the-Date
Moving Forward:
A conference on healthy solutions for communities impacted by trade, ports and goods movement
Fri. Nov. 30 - Sat. Dec. 1, 2007
Carson Community Center
Carson, CA

Please go to www.theimpactproject.org for more information.

Organized by

A collaboration of community and university partners, including the Outreach Program of the SCEHSC

Trojan hearts

A new research study on air pollution and cardiovascular (heart) health is recruiting first-year University of Southern California college students. Published studies show a link between air pollution and heart disease in older adults, and USC researchers want to see if early indicators of heart disease can be detected in college-age students. Students in the study will fill out questionnaires and also undergo several health tests. In addition, air pollution monitoring data will be collected to determine each student’s lifetime exposure to air pollution, based on where each student lived before enrolling at USC. For more information, please visit the USC TROY Study website. Center member Ed Avol directs the study.

Center Member Profile: Ed Avol

Ed Avol, MS, is Professor of Preventive Medicine at the University of Southern California’s Keck School of Medicine and co-director of the SCEHSC’s Exposure Assessment and GIS Facility Core. His research interests include the relationship

Center Member Profile: William Hinds

William Hinds, MS, ScD, is Director of the Center’s Exposure Assessment and GIS Facility Core. He is Professor of Environmental Health Sciences at UCLA and is a member of the Center for Occupational and Environmental Health (COEH). In addition, he also directs the UCLA Industrial Hygiene Program and the Southern California NIOSH Education and Research Center. He is also a member of the Southern California Particle Center. Dr. Hinds’s research interests include the study of aerosols (airborne particles), environmental tobacco smoke, performance and evaluation of respiratory protective devices, and industrial control of airborne contaminants. Link to SCEHSC Member Profile.
our SCEHSC Newsletter? Please visit our website.

between air pollution and disease; exposure assessment methods; the respiratory health development of children, adolescents and adults; lung function testing and assessment; and development of health and exposure studies. Link to SCEHSC Member Profile.

Lead...in even more unexpected places

Unsafe imported products are making headlines on a daily basis. Most prominent are stories about toys and jewelry from China containing hazardous levels of lead. See link to USA Today story, Feds focus on lead in kids’ jewelry, and link to New York Times story, In 3rd Recall, Mattel Says More Toys Include Lead. Less well-publicized are certain food imports from Mexico that may also contain high levels of lead. The May issue of American Journal of Public Health (AJPH) reports on elevated lead levels in children and pregnant women in Seaside, CA, and the connection with eating a delicacy called chapulines (fried grasshoppers imported from certain parts of Oaxaca). View the AJPH abstract. View a recent news story. More.

Exercise reduces breast cancer risk

A study led by Center member Dr. Leslie Bernstein has found that women who exercise five or more hours per week have a decreased risk of developing breast cancer as compared to less active women. Risk was reduced among women participating in strenuous activity, such as swimming, jogging or participating in aerobics activities for more than five hours per week on a regular basis.

Link to USC News Press Release.
Center Member Profile: Leslie Bernstein

Leslie Bernstein, MS, PhD, is currently Professor and AFLAC Chair in Cancer Research at the Keck School of Medicine at USC. Her research interests include breast cancer etiology, pathogenesis, prognosis and aspects of survival including quality of life. This month Dr. Bernstein is leaving USC to take a position at City of Hope, where she will direct the Department of Cancer Etiology. Our Center wishes her the best! Link to SCEHSC Member Profile.

Which way is the wind blowing? Continued...

In 2006, the investigators looked at nighttime conditions, when the winds are less and often in a different direction, the temperatures are lower, the humidity is higher, and traffic is less. Drs. Zhu, Hinds and collaborators studied the I-405 (San Diego Freeway) in LA and found that average traffic flow was only 25% of that during the day. Despite the low traffic, the investigators found that the ultrafine particle counts close to freeways were 80% of the previous daytime levels.

The direction the wind blows was found to be important. During the daytime when the wind usually blows from the west, the levels of ultrafine particles were high east (“downwind”) of the freeway. At night during the study, the winds were typically blowing from the east, resulting in higher ultrafine particles west (downwind) of the I-405. Also of importance, the study showed in the evening levels of ultrafine particles did not drop off as quickly as during the day. This means that there were still high levels of ultrafine particles measured at night as far away as 300 meters from the freeway, despite the fact that there was much less traffic.

Lead...in more unexpected places *Continued*...

In addition, nearly three years after the candy giant Mars Inc. said it stopped producing a line of Mexican candies because of dangerously high lead levels, the products are still available in California and still contaminated. View a recent news story.

The Center’s Community Outreach and Education Program (COEP) is actively engaged in a nationwide effort, with seven other universities, to develop and disseminate educational materials on public health issues, including lead poisoning. Recently, outreach staff Carla Truax and Alena Groopman presented information on new sources of lead exposure to the Los Angeles County Health Department at the Southern Regional Childhood Lead Poisoning Prevention Program (CLPPP) Meeting and also to attendees of two training sessions at the East Los Angeles Skills Center.

For resources on childhood lead poisoning, please visit the HOPE Partnership page in the Community Outreach and Education Program section of our Center website and click on "Lead Poisoning."

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This newsletter is produced by the Center’s Community Outreach and Education Program, with special thanks to: Alena Groopman, Andrea Hricko, Ariella Morrow, Rishi Patel, Carla Truax and outreach volunteer writer Bonnie Nadzam.

This e-mail has been sent to you by the Community Outreach and Education Program of the Southern California Environmental Health Sciences Center (SCEHSC) based at the Keck School of Medicine of the University of Southern California (USC).

Our Center, funded by the National Institute of Environmental Health Sciences, has scientific investigators from USC.
and from the UCLA Schools of Public Health and Medicine. Additional support for Center scientific and outreach activities comes from the Hastings Foundation, U.S. Environmental Protection Agency, other National Institutes of Health (NIH) institutions, and The California Endowment.

For more information, please visit www.usc.edu/medicine/scehsc or e-mail us at scehsc@usc.edu. Thanks for reading!