Conference Scheduled for November 1, 2012: Occupational and Environmental Factors in Neurological Disease

The UCSF Division of Occupational and Environmental Medicine is hosting a special one-day conference, “Occupational and Environmental Factors in Neurological Disease” to take place in San Francisco on Thursday November 1, 2012. The prestigious Society of Toxicology (SOT) has committed its sponsorship to the conference; NIOSH is reviewing a grant request for additional support. The conference addresses an important topic with the goal of maximizing interactions among occupational and environmental health clinicians, researchers, and public health policy-makers. In addition, a hands-on training workshop the afternoon before the main meeting day will provide an important additional educational training opportunity for non-neurologists who are clinical occupational practitioners.

Occupational and environmental causes of neurological disease comprise an extensive and complex set of exposures, subsuming chemical, biologic, and physical factors. Despite this heterogeneity, a number of general principals apply to the field. First, emerging risk factors are regularly recognized, some with novel syndrome manifestations and some as newly appreciated causes of well-recognized morbidities. As importantly, established causes of disease are continually re-manifested through exposure scenarios newly appreciated or re-discovered. Occupational and environmental issues related to hearing, the special senses, sympathetic neuropathy, and vibration effects have been under-appreciated in both the disciplines of neurology and occupational medicine, in particular potential multiple exposure interrelationships. Neuropathy, both toxic and entrapment, remains a major diagnostic concern in occupational medicine. Thus, occupational and environmental exposure scenarios remain important to evolving understandings of both the natural history of disease and neuropathic mechanisms, ranging from excitatory neurotoxins in CNS disease to physical factors in entrapment neuropathies. Because occupational and environmental health professionals need to be well-informed about new, emerging, or re-emerging risk factors; be cognizant of evolving concepts pertaining to pathophysiological mechanisms; and keep abreast of current practice in the diagnosis and treatment of these conditions, this special Conference will make a real contribution.

“Occupational and Environmental Factors in Neurological Disease” will:

- Provide a series of thematic presentations by recognized experts on a full range of topics covering the subject of occupational and environmental factors in neurological disease.
- Integrate the disparate topics covered into an overarching framework in which to approach occupationally and environmentally-associated neurological insults, including shared structure-activity relationships and mechanisms for toxicants and common issues in clinical and epidemiological assessment.
- Highlight key priorities for primary, secondary, and tertiary prevention of work-related and environmentally-caused neurological illness and injury, including regulatory aspects of such prevention.
- Offer non-didactic educational experiences to further promote these goals, including three hands-on workshop opportunities (nerve conduction; neuropsychiatric testing; and neurological examination).

A planning committee has been formed and a number of U.S. and international leaders in the field have agreed to participate. The meeting is timed to begin just following the annual American Association of Public Health meeting which will be taking place in San Francisco in 2012. The special Conference will be followed on November 2-3 with a day and a half of our Division’s regular CME course updating a variety of topics in occupational and environmental medicine.

For details on conference registration, please link to the UCSF CME office:
https://www.cme.ucsf.edu/cme/CourseDetail.aspx?courseumber=MDM13N01

The conference will be taking place at the Fisherman’s Warf Holiday Inn in San Francisco.

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Dr. Robert Kosnik is Associate Clinical Professor of Medicine, UCSF Division of Occupational and Environmental Medicine. He is a graduate of the University of Toronto and is a certified specialist in Occupational Medicine in both the U.S. and Canada. He provides leadership to UCSF Occupational Health Services with a focus on maintaining the health of the staff and on preventing the transmission of communicable diseases in UCSF’s Medical Center and research laboratories. He is currently working on providing wellness programs to staff injured at work. In 2011, he completed a detailed review on the surveillance of marine pilots in San Francisco Bay. Dr. Kosnik has contributed to professional associations as a past President of the Occupational and Environmental Association (Canada), a past Chair of the examination committee of occupational medicine specialists for the Royal College of Physicians and Surgeons (Canada), and President of the Association of Occupational and Environmental Clinics (U.S.).

Dr. Robert Harrison is Clinical Professor of Medicine at the UCSF, where he has served on the faculty since 1984. He founded and directed the UCSF Occupational Health Services for over 15 years, and now is a senior attending physician there. He has diagnosed and treated over 10,000 patients with work- and environmental-induced diseases and injuries. He also directs the worker tracking and investigation program for the California Department of Public Health. He received his BA from the University of Rochester and MD from the Albert Einstein College of Medicine. He is board certified in both Internal Medicine and Occupational Medicine. He has served on the CalOSHA Standards Board and has authored numerous publications in the area of occupational medicine.

Dr. Paul D. Blanc is Professor of Medicine and holds the Endowed Chair in Occupational and Environmental Medicine at UCSF. He has been on faculty since 1988, serving as Chief of the Division of Occupational and Environmental Medicine for much of that time. He is board certified in internal medicine, occupational medicine, and medical toxicology. He received his BA from Goddard College (Vermont), where he first became interested in health and occupation. He later trained at the Harvard School of Public Health and the Albert Einstein College of Medicine. He has authored numerous scholarly publications on the subject of toxic exposures and illness and the general interest book, *How Everyday Products Make People Sick* (2009, University of California Press). In 2011, he received a grant from the National Library of Medicine to complete a book on the 20th century history of the rayon industry. His blog is hosted by Psychology Today: [http://www.psychologytoday.com/blog/household-hazards](http://www.psychologytoday.com/blog/household-hazards).

Report from the COEH

The Northern California Center for Occupational and Environmental Health (COEH) is a multidisciplinary program of the University of California at Berkeley, Davis, and San Francisco. The COEH is also one of the 16 regional Education and Research Centers funded by the National Institute for Occupational Safety and Health (NIOSH). The Occupational and Environmental Medicine Program at UCSF is one of its components.

The mission of the COEH is to promote health and safety in workplaces and communities by educating health professionals, developing new knowledge by undertaking interdisciplinary research, and responding to the needs of workers and the general public. The COEH, through these activities supports federal, state, and local agencies, health and safety professionals, industry, labor, and community-based organizations. There are over 60 faculty, plus researchers and other professional staff from a number of disciplines on the three UC campuses. The Director of the COEH is John Balmes, MD; the deputy director is Patty Quinlan, MPH, CIH. The teaching programs of the COEH at the three campuses include:

UCSF

**Occupational and Environmental Medicine-** Occupational medicine residency and interdisciplinary, clinic-based training for graduate students in nursing, industrial hygiene, & ergonomics; clinical services for the public; research in occupational and environmental health.  (Program Director: Gina Solomon MD, MPH)

**Occupational and Environmental Health Nursing -** Graduate education and doctoral research on preventing and treating work-related injuries and illness. (Program Director: Oisaeng Hong, RN, PhD)

UC Berkeley

**Ergonomics-** Graduate education, research, and consulting services to prevent musculoskeletal injuries (joint Berkeley/San Francisco program).  (Program Director: David Rempel, MD)

**Industrial Hygiene-** Graduate education and basic and applied research in industrial hygiene. (Program Director: Mark Nicas, PhD)

**Occupational and Environmental Epidemiology-** Graduate education and research focused on a variety of occupational and environmental health. (Program director: Ellen Eisen, Sc.D)

**International Health-** Worldwide research collaborations and an interdisciplinary master’s program focused on helping developing countries address occupational and environmental health problems. (Program Director: Kirk Smith, PhD, MPH)
We currently have eight trainees in the program: Dr. Thanjira Jiranantakan, an internal medicine-trained physician from Thailand who completed a Medical Toxicology fellowship at UCSF; Dr. Eric Dinenberg, who is researching approaches to incorporating principles of Mindfulness into workplace wellness programs; Dr. Julia Maclsaac, an internist who is interested in environmental health and public health policy; Dr. Timur Durrani, a combined OEM/Medical Toxicology Fellow who previously completed residencies in family medicine and preventive medicine and who serves with the U.S. Army reserves; Dr. Xing Yang, who has a Ph.D. and an extensive background in laboratory science research; Dr. Anita Zhao, who worked as a biostatistician and researcher in the pharmaceutical industry for many years; Dr. Joanne Perron, who has a background in ob/gyn and expertise in environmental reproductive toxicology; and Dr. Scott Petersen, who has practiced clinical occupational medicine in the Northern California for over a decade.

Our program includes two years of training. In the first year, trainees obtain an MPH degree at U.C. Berkeley. The second year focuses on supervised practical training, including time in clinics; local, state, federal or international governmental agencies; NGOs; academic; consulting; and industry settings. Trainees participate in patient care activities in university and community-based clinics for occupational or environmental injuries and illnesses, infectious disease prevention services, toxicology consultations, and placement and surveillance examinations of workers. The training includes site visits to workplace and community settings to evaluate occupational and environmental health risks. The rotations and site visits are supplemented by weekly clinical case conferences, biweekly grand rounds, research seminars and journal clubs. Trainees also design, complete, and present a research project.

Learn more about the program on our website: http://coeh.berkeley.edu/ucsfoem/residency.html
Or contact the Residency Director, Gina Solomon, M.D., M.P.H., gina.solomon@ucsf.edu
Lung Transplantation for Occupational Lung Diseases

Over the last twenty-five years, lung transplantation has emerged as the “last therapeutic option” for patients suffering from end-stage lung disease. It has only been within the last ten years, however, that researchers have begun to focus on factors unrelated to the surgery itself that impact how well patients do after lung transplantation. An area of particular interest is improving the selection and management of patients who may benefit from this procedure. An important component of improving patient selection and management is understanding how the reason for needing a transplant, whether it be cystic fibrosis, chronic obstructive pulmonary disease or other types of lung fibrosis, may impact survival after lung transplantation.

Lung transplantation for end-stage lung disease related to occupational exposures is unusual, accounting for only 0.5% of transplants performed in the United States. As a result, little information is available to guide patients and physicians considering this advanced intervention. Up until 2011, research in lung transplant for occupational lung diseases had been limited to descriptions of individual patients or two instances of single transplant centers’ reports on lung transplant for a few patients with silicosis.

In light of the limited published reports, Jonathan Singer, MD MS, a UCSF pulmonologist specializing in lung transplantation worked with Paul Blanc, MD, to address this knowledge gap. Dr. Singer requested access to a national database of all lung transplantations performed in the United States maintained by the United States Organ Procurement and Transplant Network Registry. He identified 37 cases of patients who underwent lung transplant for occupational lung diseases between 2005 and 2010. He compared the survival after transplant in these 37 patients to nearly 3500 patients of similar characteristics who were transplanted for other reasons. Dr. Singer found that patients who underwent lung transplantation for silicosis had similar survival as patients transplanted for non-occupational lung diseases. Notably, he found that patients transplanted for other types of occupational diseases (including coal workers pneumoconiosis, other types of pneumoconioses, asbestosis, berylliosis, farmer’s lung, and metal pneumoconiosis) were three-times more likely to die in the first year after transplant than patients transplanted for non-occupational lung diseases.

Published in late 2011, this study is the largest report in the field of lung transplant for occupational lung disease to date. Says Dr. Singer, “Lung transplantation for occupational lung disease is rare. It was only through studying a large database of all transplants performed in the US that we were able to uncover that patients undergoing lung transplantation for non-
silicosis related occupational lung diseases are at very high risk for dying. These are important findings in light of the increasing burden of silicosis and other occupational lung diseases throughout the world.

“While we haven’t identified the reason(s) that account for this risk, now that we know there is a problem, we can start looking into why these patients aren’t doing as well as they should be. Clinically, this study may increase our vigilance in screening this vulnerable population for factors that may make transplant difficult for them and paying extra careful attention during the perioperative period so that they can realize the full benefit of lung transplantation.”