CORNELL CHRONICLE

Chemicals from fires may increase risk of breast cancer in women firefighters

By Susan S. Lang | July 14, 2008

Firefighters can be exposed to toxic chemicals every time they respond to a call. Many of those chemicals are known to increase the risk of breast cancer, report two Cornell researchers.

To encourage women firefighters to wear their self-contained breathing apparatus (SCBA) longer than most tend to do and during all phases of firefighting, the Cornell scientists have pulled together important information on the sources of these chemicals and the types of fire scenarios where they can be encountered.

"In developing a database of chemicals in workplaces that are known to cause mammary tumors in rats, it just popped out at my colleague Nellie Brown that many of the chemicals we were studying are ones that are formed during thermal decomposition and firefighters are exposed to routinely in their work," said Suzanne Snedeker, associate director for translational research for Cornell's Breast Cancer and Environmental Risk Factors Program (BCERF).

Brown is director of Workplace Health and Safety Programs in Cornell's ILR School and an expert on chemicals that are generated during thermal decomposition in active and smoldering fires.

To inform women firefighters of their particular risk and what to do about it, Brown and Snedeker have co-authored a brochure that targets women firefighters. Nationally there are about 9,000 paid women firefighters.

"The brochure outlines all the different types of fire scenarios and the types of chemicals that are possible breast carcinogens that result from the thermal decomposition of a host of products, from smoldering or burning of wood, to foams, glues, resins, paints, mattresses, shower stalls, coatings for wires and cables, rubber, window treatments and vinyl tubing, as well as chemicals of concern released from brush, forest and tire fires," Snedeker said.

"Our big take-home message is, wear self-contained breathing apparatus during all phases of firefighting. Put on the gear before arriving at a fire and don't take it off until the operation or inspection is completed, even during fire inspections conducted days later when chemicals can still outgas from charred remains."

Studies have shown, she added, that firefighters often don't put on their SCBA early enough and take it off too soon.

The brochure is published by the Cornell Sprecher Institute for Comparative Cancer Research and BCERF with support from the New York State Department of Health and Department of Environmental Conservation.

The full brochure is available at: **http://envirocancer.cornell.edu/learning/alert/fire08.cfm** (http://envirocancer.cornell.edu/learning/alert/fire08.cfm). To request print copies, call BCERF at 607-254-2893.

MEDIA CONTACT

Media Relations Office
mediarelations@cornell.edu
(mailto:mediarelations@cornell.edu)
607-255-6074 (tel:607-255-6074)