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Study targets hidden household chemicals

**VOLUNTEERS SOUGHT:
Can the coating
on a popcorn bag
affect your baby?**

BY LENA SIN
STAFF REPORTER

How much do frying pans, popcorn bags and foam mattresses affect your basic body functions, including the control of your blood pressure and metabolism?

No one knows for sure, but Glynis Webster is determined to find out. The musician turned University of B.C. PhD student is studying two sets of chemicals often found in house-

hold goods to determine its impact on the thyroid function of pregnant women, which may lead to impaired fetal brain development.

Flame-retardant chemicals called polybrominated diphenyl ethers (PBDEs) are commonly found in items such as upholstery, furniture foam and the plastic casing of TVs.

Meanwhile, perfluorinated compounds (PFCs) are mainly used as stain and water repellents in a wide range of products including popcorn bags, teflon frying pans and water-resistant jackets.

Webster was prompted to look at both groups of chemicals after studies showed pregnant rats and mice exposed to high levels of certain PBDEs during pregnancy led to defi-

ciencies in the motor control, learning and memory of offspring.

The lab studies showed that the chemicals interfered with the animals' thyroid gland, which controls metabolism, body temperature, blood pressure and energy levels.

For Webster, the obvious question became: If pregnant rats and mice and their offspring were affected by high concentrations of these chemicals — could the same be true for humans?

"There are almost no human health studies for either groups of compound except for maybe people who are very highly exposed at work," says Webster. "But in the normal population, there's almost nothing known about potential health

effects." To complete her investigation, Webster will recruit 150 expectant mothers in their first 15 weeks of pregnancy.

Two maternal blood samples will be collected in mid-pregnancy as well as a sample of umbilical cord blood at delivery.

The participants will also be asked to do in-home surveys about exposure to the chemicals found in common household goods.

Since both groups of chemicals are widely used, it's likely that virtually everyone is exposed to them and has accumulated some level of PBDEs and PFCs in their systems.

Although there are currently no known human health risks, it's interesting to note a 2004 study has

shown PBDE levels found in the North American population is 10 to 100 times higher than humans in Europe or Japan.

It's believed Webster's study will be the first to look closely at the impact of these chemicals on pregnant mothers and their children.

Webster says she was influenced by Theo Colburn's book, *Our Stolen Future*, to return to school in 1998 to study this emerging arena of science that looks at the connection between chemicals and the environment and human health.

For more information, contact Webster at 604-827-5454 or visit www.cher.ubc.ca/chirp. The study will be launched on Oct. 23.

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