

NEWS ABOUT THE ENVIRONMENT AND CANCER

Quarter 4 News (October - December 2008)

Massive UK crackdown on the use of scores of toxic pesticides: New EU rules, opposed by Gordon Brown, will phase out use of cancer-causing compounds in Britain.

Britain is to get its toughest crackdown on toxic substances in food and the environment, despite determined resistance to the safety measures from Gordon Brown. Scores of pesticides suspected of causing cancer, DNA damage and "gender-bender" effects are to be phased out under new EU rules, which are being hailed as a revolution in the way the public is protected against poisonous chemicals. The use of all pesticides in public places is to be dramatically reduced, with aerial spraying banned anywhere in the country.

The Independent, December 21, 2008

Faulty gene makes children who live near power lines more likely to develop leukaemia

Scientists have found new evidence of a link between overhead power lines and childhood leukaemia. They have identified a defective gene that quadruples the risk of cancers of the blood and bone marrow for carriers who live within 330ft of an overhead cable. The discovery could help explain the findings of a Government-funded study published three years ago. Living near high-voltage power lines increases the risk of childhood leukaemia. It concluded that children who grew up near high-voltage power lines were, on average, almost 70 per cent more likely to be diagnosed with leukaemia than those living further away. Previous studies have suggested that exposure to the electromagnetic fields (EMFs) created around power lines can cause damage to the DNA, or genetic blueprint, of animal cells. The latest research, which is from China, shows that one in 20 children inherits a faulty copy of a gene that normally helps repair DNA damage, making them more vulnerable to developing leukaemia when young.

Daily Mail, December 20, 2008

EU deal on new pesticide controls

The EU is moving towards stricter controls on pesticides after European Parliament negotiators reached a deal with the 27 EU member states. The legislation will ban 22 chemicals that can trigger cancer or cause neural, hormonal or genetic damage. The full parliament is expected to vote on the package in January, then it goes to EU leaders for final approval. Crop scientists and pesticide firms say the controls may create new pest resistance problems and reduce yields. If adopted, the legislation will let member states license pesticides at national level or through mutual recognition. The new rules are meant to replace the EU's 1991 pesticides legislation. The EU is to be divided into three zones - north, centre and south - with compulsory mutual recognition within each zone as the basic rule. Currently pesticide approvals are handled by each individual country. Individual countries will still be able to ban a pesticide because of specific environmental or agricultural circumstances.

BBC NEWS, December 19, 2008

Estrogen in moisturizers may worsen breast cancer

Breast cancer patients who apply moisturizers may be dosing themselves with oestrogen without even knowing it, investigators reported at a breast cancer symposium in San Antonio. Dr. Adrienne Olson, with Breastlink in Hawthorne, California, and colleagues analyzed 16 widely available moisturizers for oestrogen-like compounds. None of the creams analyzed noted any oestrogen content in their list of ingredients. Even so, six samples contained oestriol or oestrone. Olson, who is a seven-year breast cancer survivor, explained that estrogens applied to the skin are more efficiently absorbed into the body than estrogens taken orally.

She urged women with breast cancer that is driven by oestrogen (that is, oestrogen-receptor positive breast cancer) to avoid externally applied oestrogen to minimize the risk of a recurrence. Women without breast cancer are also at risk, she added. If they use oestrogen-containing topical moisturizers, they may be dosing themselves daily with oestrogen for extended periods, thereby boosting their risk of breast cancer.

Reuters Health, December 15, 2008

Organochlorine exposure has been linked to non-Hodgkin lymphoma (NHL) risk.

To determine whether this relationship is modified by immune gene variation, we genotyped 61 polymorphisms in 36 immune genes in 1,172 NHL cases and 982 controls from the NCI-SEER study. We examined three exposures with elevated risk in this study: PCB180 (plasma, dust measurements); the toxic equivalency quotient (an integrated functional measure of several organochlorines) in plasma; and alpha-chlordane (dust measurements, self-reported termiticide use). Plasma (100 cases, 100 controls) and dust (682 cases, 513 controls) levels were treated as natural log-transformed continuous variables. Associations between all three exposures and NHL risk were limited to the same genotypes for IFNG (C-1615T) TT and IL4 (5'-UTR, Ex1-168C>T) CC. Associations between PCB180 in plasma and dust and NHL risk were limited to the same genotypes for IL16 (3' UTR, Ex22+871A>G) AA, IL8 (T-251A) TT, and IL10 (A-1082G) AG|GG. This shows that the relationship between organochlorine exposure and NHL risk may be modified by particular variants in immune genes, and provides one of the first examples of a potential gene-environment interaction for NHL.

Colt, et al., *Blood*, December 09, 2008

Pollutants in the womb can trigger adult cancers: Mouse study shows fetal exposures may pose long-term risks

Mouse moms exposed late in pregnancy to heavy doses of a carcinogen gave birth to pups that inevitably developed lymphomas and lung cancers, a new study shows. The malignancies generally didn't show up until the offspring reached the human equivalent of adulthood. The good news: Milk from carcinogen-treated mouse moms posed little added risk. This demonstration "that very short early-life exposures can have major consequences is very important," observes toxicologist Linda S. Birnbaum of the Environmental Protection Agency in Research Triangle Park, N.C.

Science new, December 09, 2008

Fewer phthalates found in perfume, similar products

A new report finds fewer controversial chemicals in personal care products, such as perfume and hair spray. Some manufacturers are removing or reducing their use of hormone-like ingredients called phthalates, commonly found in fragrances, according to a study released today by the Campaign for Safe Cosmetics, a coalition of environmental groups. Environmentalists have called for manufacturers to phase out phthalates because of studies that link them to genital changes in baby boys, reduced sperm counts in men and early puberty in girls. Studies by the Centers for Disease Control and Prevention have found phthalates in the urine of nearly everyone tested. The campaign's 2002 study found that more than 70% of 72 products tested contained phthalates. Phthalates usually aren't listed on ingredient labels. They also may leach into products from plastic containers.

USA Today, December 09, 2008

New product tests reveal beauty companies are removing toxic phthalates

Under pressure from consumer advocates and regulators, some leading beauty companies are using fewer toxic chemicals than they did a few years ago, according to new product tests released today by the Campaign for Safe Cosmetics. The tests, conducted in fall 2008, reveal that at least some segment of the beauty industry has made considerable progress in removing phthalates, a set of industrial chemicals linked to birth defects, asthma, early puberty and decreased sperm counts, according to animal and human studies. However, some companies continue to put high levels of phthalates into fragrance. The tests follow up on the 2002 report "Not Too Pretty," which revealed that 72% of popular cosmetic products tested -- including shampoos, deodorants, fragrances and other products -- contained phthalates.

Campaign for Safe Cosmetics (press release), December 09, 2008

Drinking water contamination mapped

Wide-ranging survey reveals low levels of some drugs and pesticides in US tap water. The researchers found small traces of pesticides and drugs in US drinking water. The most comprehensive survey so far has found a slew of drugs, personal care products, pesticides and other contaminants in drinking water being delivered to millions of

people across the United States. None of the compounds appeared at levels thought to be immediately harmful to human health. But the researchers were surprised to find widespread traces of a pesticide, used largely in corn (maize) growing, that has, at higher levels, been linked to cancer and other problems.

Nature.com News, December 08, 2008

It's official: Men really are the weaker sex

Evolution is being distorted by pollution, which damages genitals and the ability to father offspring, says new study. The male gender is in danger, with incalculable consequences for both humans and wildlife, startling scientific research from around the world reveals. The research – to be detailed tomorrow in the most comprehensive report yet published – shows that a host of common chemicals is feminising males of every class of vertebrate animals, from fish to mammals, including people. Backed by some of the world's leading scientists, who say that it "waves a red flag" for humanity and shows that evolution itself is being disrupted, the report comes out at a particularly sensitive time for ministers. On Wednesday, Britain will lead opposition to proposed new European controls on pesticides, many of which have been found to have "gender-bending" effects. It also follows hard on the heels of new American research which shows that baby boys born to women exposed to widespread chemicals in pregnancy are born with smaller penises and feminised genitals.

The Independent, December 07, 2008

Canadian Cancer Society poll results show government action to reduce toxic chemicals a priority for Ontarians. Take Charge on Toxics campaign and website launched.

Poll results released today by the show that Ontarians want action taken to reduce toxic chemicals in their environment even in light of current economic conditions. "Our poll shows Ontarians are concerned about the presence of toxic chemicals in their environments and the impact they have on their health and the health of their families," says Rowena Pinto, Director, Public Affairs, Ontario Division, Canadian Cancer Society. "The public is behind the Ontario government's commitment to implement a toxics reduction strategy," says Pinto. "And the poll showed this support despite an uncertain economic situation."

Canadian Cancer Society, December 04, 2008

Commonality in Signaling of Endocrine Disruption from Snail to Human

Several nuclear receptors have recently been identified as mediators of endocrine disruption as well as steroid hormone receptors. The ubiquitous environmental contaminant tributyltin chloride (TBT) is a ligand for retinoid X receptor (RXR) in rock shell at the nanomolar level, and it acts as a ligand for both the RXR and the peroxisome proliferator-activated receptor γ in the frog *Xenopus laevis* and in humans. TBT, which induces imposex in marine snails and promotes adipogenesis in *X. laevis* and in mice, is an example of an environmental endocrine disrupter that promotes adverse effects, from the snail to mammals, through common signaling. In addition, juvenile hormone agonists used as pesticides showed endocrinedisruptive effects on parthenogenic *Daphnia magna*, lowering rates of reproduction, and inducing 100% male offspring. In this article, we focus on commonality in signaling through nuclear receptors and newly found endocrine disruption in *D. magna*.

Iguchi and Katsu, *BioScience*, December 01, 2008

Hairspray linked to birth defect

Boys born to women exposed to hairspray in the workplace may have a higher risk of being born with a genital defect. Imperial College London scientists talked to women who had babies with hypospadias, where the urinary tract is found away from the penis. They reported that hairspray exposure more than doubled the risk. The study in the journal *Environmental Health Perspectives*, said it was too early to say for certain that hairspray was the cause. The incidence of hypospadias has risen sharply in recent decades, and some experts have pointed the finger of suspicion at chemicals called phthalates, found in some plastics, including those found in hairspray.

BBC News, November 21, 2008

Polluters liable for 'annoyances,' even if they have broken no laws

Polluters can be successfully sued for emitting annoying odours, dust or noise - even if they are in compliance with government regulations, the Supreme Court of Canada ruled yesterday. In a landmark ruling favouring the environmental movement, the court allowed a class action launched by 2,000 citizens near Quebec City who suffered for half a century from an irritating blanket of dust and odour emanating from a St. Lawrence Cement Inc. plant that was located in their midst.

The Globe and Mail, November 21, 2008

Asbestos time bomb still haunts homes and workplaces: National Asbestos Awareness Week

Asbestos-related disease remains a ticking time bomb for Australians because there is no nationally consistent approach to asbestos removal and management in buildings and infrastructure and poor data collection across states and territories, unions said today. As unions and asbestos victims' organizations mark Asbestos Awareness Week (Nov 23- 29, 2008) with events across the country, the ACTU is calling for greater co-ordination and renewed action to remove asbestos from homes, workplaces and public infrastructure. It is also important employers and government agencies continue to highlight the risks for home owners and tradespeople who attempt renovations or repairs where asbestos may be present. ACTU President Sharan Burrow said: "Australia had one of the highest rates of asbestos use in the world and the highest known rate of mesothelioma sufferers in the world.

Australian Council of Trade Unions, (Media Release), November 21, 2008

Toxic contamination starts at home: Study

When women from 120 middle-class homes learned their bodies contained low levels of toxic chemicals, most of them blamed chemical spills, waste dumping or secret military experiments. They were stunned to learn the truth was closer to home. Most of their exposure came from harmless-looking plastics, flame-retardant clothing, beauty products and household cleaners. A new study says we tend to put too much blame on environmental disasters that don't actually affect us. "It's the consumer products" that bring chemicals into our bodies, says Kathleen Cooper, a researcher for the Canadian Environmental Law Association.

Canwest News Service, November 20, 2008

Occupational exposure to pesticides and lymphoid neoplasms among men: results of a French case-control study.

OBJECTIVES: Investigating the relationship between occupational exposure to pesticides and the risk of lymphoid neoplasms (LN) in men. **METHODS:** A hospital-based case-control study was conducted in six centres in France between 2000 and 2004. The cases were incident cases with a diagnosis of lymphoid neoplasm aged 18 to 75 years. During the same period, controls of the same age and gender as the cases were recruited in the same hospital, mainly in the orthopaedic and rheumatological departments. Exposures to pesticides were evaluated through specific interviews and case-by-case expert reviews. Four hundred and ninety-one cases (244 cases of non-Hodgkin's lymphoma (NHL), 87 of Hodgkin's lymphoma (HL), 104 of lymphoproliferative syndromes (LPS) and 56 of multiple myeloma (MM) cases) and 456 controls were included in the analyses. The odds ratios (OR) and 95% confidence intervals (95% CI) were estimated using unconditional logistic regressions. **RESULTS:** Positive associations between HL and occupational exposure to triazole fungicides and urea herbicides were observed (OR=8.4 [2.2-32.4], 10.8 [2.4-48.1] respectively). Exposure to insecticides, fungicides and herbicides were linked to a three-fold increases in MM risk (OR=2.8 [1.2-6.5], 3.2 [1.4-7.2], 2.9 [1.3-6.5]). For LPS subtypes, associations restricted to hairy-cell leukaemia (HCL) were evidenced for exposure to organochlorine insecticides, phenoxy herbicides and triazine herbicides (OR=4.9 [1.1-21.2], 4.1 [1.1-15.5], 5.1 [1.4-19.3], although based on small numbers. Lastly, despite the increased odds ratios for organochlorine and organophosphate insecticides, carbamate fungicides and triazine herbicides, no significant associations were evidenced for NHL. **CONCLUSIONS:** The results, based on case-by-case expert review of occupation-specific questionnaires, support the hypothesis that occupational pesticide exposures may be involved in HL, MM and HCL and do not rule out a role in NHL. The analyses identified specific pesticides that deserve further investigation and the findings were consistent with those of previous studies.

Orsi, et al., *Occup Environ Med*, November 18, 2008

New study backs solvent, leukemia link

Research from Italy provides new evidence that exposure to the industrial solvent benzene increases a person's risk of developing multiple myeloma. Dr. Adele Seniori Constantini of the Center for Study and Prevention of Cancer and her colleagues also found an increased risk of chronic lymphoid leukemia with benzene exposure. Two other oil-derived industrial chemicals, xylene and toluene, were also tied to greater chronic lymphoid leukemia risk. Benzene, a known carcinogen, is used in the manufacturing of plastic, synthetic rubber, dyes and drugs. It is understood to cause acute myeloid leukemia, but its association with multiple myeloma and chronic lymphoid leukemia risk "are still under debate," Constantini and her team explain in the *American Journal of Industrial Medicine*.

There was no association between acute myeloid leukemia and benzene, probably, the researchers say, because the disease develops within a relatively short time after exposure, and the cases were diagnosed about 30 years after benzene was "effectively banned" by a 1963 law limiting the amount used in industrial materials to 2 percent. The researchers did find a link between multiple myeloma and chronic lymphoid leukemia and benzene exposure. Overall, medium to high levels of benzene exposure nearly doubled the risk of these two blood cancers. The more intense exposure was and the longer it lasted, the greater the risk.

Reuters, November 18, 2008

Occupation, exposure to chemicals, sensitizing agents, and risk of multiple myeloma in Sweden

This study sought to identify occupations with high incidence of multiple myeloma and to investigate possible excess risk associated with occupational exposure to chemicals and sensitizing agents in Sweden. A historical cohort of 2,992,166 workers was followed up (1971-1989) through record linkage with the National Cancer and Death Registries. For each job category, age and period standardized incidence ratios and age and period adjusted relative risks of multiple myeloma were calculated using Poisson models. Exposure to chemicals and to sensitizing agents was also assessed using two job-exposure matrices. Men and women were analyzed separately. During follow-up, 3,127 and 1,282 myelomas were diagnosed in men and women, respectively. In men, excess risk was detected among working proprietors, agricultural, horticultural and forestry enterprisers, bakers and pastry cooks, dental technicians, stone cutters/carvers, and prison/reformatory officials. In women, this excess was observed among attendants in psychiatric care, metal workers, bakers and pastry cooks, and paper/paperboard product workers. Workers, particularly bakers and pastry cooks, exposed to high molecular weight sensitizing agents registered an excess risk of over 40% across the sexes. Occasional, although intense, exposure to pesticides was also associated with risk of myeloma in our cohort. Our study supports a possible etiologic role for farming and use of pesticides in myeloma risk. The high incidence found in both female and male bakers and pastry cooks has not been described previously. Further research is required to assess the influence of high molecular weight sensitizing agents on risk of multiple myeloma.

Lope, et al., *Cancer Epidemiol Biomarkers Prev*, November 17, 2008

Campaigner wins seven-year battle to force rethink on use of pesticides

An environmental campaigner yesterday won a landmark victory against the government in a long-running legal battle over the use of pesticides. The high court ruled that Georgina Downs, who runs the UK Pesticides Campaign, had produced "solid evidence" that people exposed to chemicals used to spray crops had suffered harm. The court said the government had failed to comply with a European directive designed to protect rural communities from exposure to the toxins. It said the environment department, Defra, must reassess its policy and investigate the risks to people who are exposed. Defra had argued that its approach to the regulation and control of pesticides was "reasonable, logical and lawful". Downs, who lives on the edge of farmland near Chichester, West Sussex, launched her campaign in 2001. The judge described how she was first exposed to pesticide spraying at the age of 11 "and began to suffer from ill health, in particular flu-like symptoms, a sore throat, blistering and other problems". Downs said the government had failed to address the concerns of people living in the countryside "who are repeatedly exposed to mixtures of pesticides and other chemicals throughout every year, and in many cases, like mine, for decades". People were not given prior notification about what was to be sprayed near their homes and gardens, she said.

The Guardian, November 15, 2008

Cancer society turns sights to farm pesticides: Agency holding conference with leading scientists on hotly contested issue of restricting agricultural bug and weed killers

For years, the Canadian Cancer Society has argued in favour of bans on the cosmetic use of pesticides around homes and gardens. But it has remained silent on the country's biggest use of bug and weed killers: on farms. Now, the society is considering weighing in on whether these sprays pose a cancer risk to farmers, other rural residents near them, and to the wider public from eating foods carrying pesticide residues. To that end, the society is holding a conference starting today at which it has assembled experts to advise it on whether cosmetic-pesticide restrictions, which now exist in Ontario, Quebec and many municipalities, should be followed by tougher action against the use of the sprays in agriculture. The society doesn't have a view on the related issue of whether organically grown foods are a better option, a topic that will also be discussed.

Globe and Mail, November 12, 2008

Child leukemia death rates increase near u.s. nuclear plants – rises greatest near oldest plants, declines near closed plants

Leukemia death rates in U.S. children near nuclear reactors rose sharply (vs. the national trend) in the past two decades, according to a recent study. The greatest mortality increases occurred near the oldest nuclear plants, while declines were observed near plants that closed permanently in the 1980s and 1990s. The study was published in the most recent issue of the European Journal of Cancer Care. The study updates an analysis conducted in the late 1980s by the National Cancer Institute (NCI). That analysis, mandated by Senator Edward M. Kennedy (D-MA), is the only attempt federal officials have made to examine cancer rates near U.S. nuclear plants.

European Journal of Cancer Care, November 11, 2008

Agent Orange exposure linked to prostate cancer

A study of Vietnam War era veterans shows that exposure to Agent Orange is associated with more than a two-fold increased risk of prostate cancer, earlier disease onset, and prostate cancer with more aggressive features.

"Consideration should be made to classify this group of individuals as 'high risk', just like men of African-American heritage and men with a family history of prostate cancer," Dr. Karim Chamie, from the University of California Davis, Sacramento, and colleagues recommend.

Reuters, November 10, 2008

Cancer at work: the killer we must confront

Smoking is not the only cause of cancer and we need to find out why people in some jobs are more vulnerable to the disease. The word cancer was once uttered in hushed voices, if at all. The media considered the subject depressing and avoided it until the advent of trauma television. Few now use euphemisms such as "the big C". We talk openly about cancer and its causes. No longer is it considered a random, unspeakable act of God or nature. But where fear has disappeared, blame takes its place. An emphasis on prevention that urges lifestyle changes means those who already live with cancer are tormented by thoughts it might be self-inflicted. Smoking is said to affect many more organs than the lungs, but to cigarettes we must now add hormone replacement treatment, bacon sandwiches, roast beef dinners, any level of alcohol, burnt toast, delayed childbearing, being overweight or too sedentary, lying in the sun, bottle feeding or — in those too old to get the new cervical cancer vaccine — having sex.

The European Journal of Oncology this month publishes Scottish research that suggests carcinogens at work kill many more people than the government claims. Professor Andrew Watterson, at Stirling University, says between 10% and 12% of fatal cancers in Scotland relate to occupation. That would mean 1,800 deaths a year — many more than those killed by road accidents, murder and suicide. All these trends are subject to high-profile government campaigns. We should be just as concerned that people die earning a living. Often, they are ignorant about the cause of their illness, as are their doctors. They lacked the information to make a safe career choice.

The Sunday Times, November 09, 2008

Work-related cancers 'increasing'

More people are dying from work-related cancers than previously thought, according to research. Professor Andrew Watterson from the University of Stirling estimated that about 1,800 cancer deaths a year are the result of work-related factors. He has called for the Scottish Government to legislate to reduce toxic pollution. Ministers said that while they took the issue "extremely seriously", regulation was reserved to Westminster. Writing in the *European Journal of Oncology*, Prof Watterson, an expert in occupational health, said more people were being exposed to cancer causing materials than ever before. He estimated that about 10% of all cancers were work related.

BBC NEWS, November 07, 2008

FDA to look at BPA in medical products

The Food and Drug Administration, in the aftermath of stinging criticism from a subcommittee of its own science board and under pressure from consumer groups, expects to make a decision before February on whether to limit exposure from bisphenol A or ban its use in polycarbonate baby bottles and other feeding products for infants. In addition, both FDA science board Chairwoman Barbara McNeil and FDA principal deputy commissioner and chief scientist Frank Torti said at an Oct. 31 public hearing that the agency would launch an investigation of BPA exposure levels in blood container products and intravenous tubing.

Plastics News, November 04, 2008

Non Hodgkin's lymphoma risk and past dioxin emissions from municipal solid waste incinerators

Dioxin emissions from municipal solid waste incinerators are one of the major sources of dioxins and therefore are an exposure source of public concern. There is growing epidemiologic evidence of an increased risk for non-Hodgkin's lymphoma (NHL) in the vicinity of some municipal solid waste incinerators (MSWI) with high dioxin emission levels. The purpose of this study was to examine this association on a larger population scale. A total of 3974 NHL incident cases was observed (2147 among males, and 1827 among females) during the 1990-1999 time period. A statistically significant relationship was found at the block group level between NHL incidence and dioxin exposure, with a relative risk (RR) of 1.120 (95% confidence interval [CI] 1.003 - 1.250) for persons living in highly exposed census blocks compared to those living in slightly exposed block groups. Post-hoc subgroup analyses per gender yielded a significant RR for females only (RR=1.187, 95% CI 1.020 - 1.382). This study, in line with previous results obtained in the vicinity of the incinerator located in Besancon (France), adds further evidence to the link between NHL incidence and exposure to dioxins emitted by municipal solid waste incinerators. However, the findings of this study cannot be extrapolated to current incinerators, which emit lower amounts of pollutants.

Viel, et al., *Environmental Health*, October 28, 2008

How toxic environmental chemical DBT affects the immune system

An international team of researchers at the University of California, San Diego School of Medicine and the University of Basel in Switzerland have issued a report on the mechanism of toxicity of a chemical compound called Dibutyltin (DBT). Their findings will be published by PloS ONE on October 28. DBT is part of a class of high toxic and widely distributed chemical compounds called organotins, DBT is most commonly used as an anti-fouling agent in paint, for example in the fishing and shipbuilding industries. It is also used in the production of polyvinyl chloride (PVC) plastic tubes and bottles. According to co-lead investigators Michael E. Baker, Ph.D., researcher in UC San Diego's Department of Medicine, Division of Nephrology-Hypertension, and Alex Odermatt, Ph.D., at the University of Basel, DBT is closely related to tributyltin (TBT), another well-known pollutant. Concern about the side effects of TBT led the United Nations' International Maritime Organization to organize a global ban on its use. "TBT is metabolized by the body's liver into DBT," the scientists explained. "Humans are also exposed to DBT by drinking water from PVC pipes. Because it is poorly broken down, DBT remains in the environment and it appears that its toxic effects are more rapid and more pronounced than those of TBT."

Medical News Today, October 28, 2008

Why cancer's gaining on us

For all the pink ribbons, breast-cancer awareness events, fund-raisers, and celebrations of "survivorship," the facts remain grim. In this country, a woman's lifetime risk of breast cancer is one in eight. In 1975, the risk was about one

in 11. Outside of skin cancer, breast cancer is the most frequently diagnosed cancer in women. It is estimated that in 2008 there will be 250,230 new cases of breast cancer among women. An estimated 41,000 women will die of metastatic breast cancer in 2008. Because we still do not know what the causes of breast cancer are, primary prevention remains an elusive goal while mammography and early detection are the focus of attention. Since World War II, the proliferation of synthetic chemicals has gone hand-in-hand with the increased incidence of breast cancer. About 80,000 synthetic chemicals are used today in the United States, and their number increases by about 1,000 each year. Only about 7 percent of them have been screened for their health effects. These chemicals can persist in the environment and accumulate in our bodies. According to a recent review by the Silent Spring Institute in Newton, 216 chemicals and radiation sources cause breast cancer in animals.

Boston Globe, October 27, 2008

Report Finds Risks of Developing Alzheimer's and Parkinson's Diseases Can Be Dramatically Reduced

Environmental factors are key drivers in Alzheimer's and Parkinson's diseases, according to the authors of a new report, Environmental Threats to Healthy Aging, released today. Importantly, the report demonstrates that the risks for Alzheimer's and Parkinson's can be dramatically reduced. It offers the most comprehensive review of the currently available research on the lifetime influences of environmental factors on Alzheimer's and Parkinson's diseases, two of the most common degenerative diseases of the brain. These influences include common dietary patterns, toxic chemical exposures, inadequate exercise, socio-economic stress and other factors. These influences can begin in the womb and continue throughout life, setting the stage for the later development of neurodegenerative as well as other chronic diseases.

Greater Boston Physicians for Social Responsibility and the Science and Environmental Health Network, October 23, 2008

Dentists Back Sealants, Despite Concerns

Cavities or chemicals? That's the dilemma for parents worried about a controversial substance found in the popular sealants that are painted on children's molars to prevent decay. The chemical is bisphenol-A, or BPA, which is widely used in the making of the hard, clear plastic called polycarbonate, and is also found in the linings of food and soft-drink cans. Most human exposure to the chemical clearly comes from the food supply. But traces have also been found in dental sealants. Although the Food and Drug Administration has reassured consumers that the chemical appears to be safe, it has received increasing scrutiny in recent months from health officials in the United States and Canada.

The New York Times, October 20, 2008

Health Canada adds Bisphenol A to list of toxic substances

The federal government has decided to add bisphenol A to the country's list of toxic substances, a move that is likely to renew attention on the widespread use of the controversial chemical in almost all food cans sold in Canada. The toxic determination, issued in today's Canada Gazette, makes Canada the first country to classify as risky bisphenol A, the chemical building block for polycarbonate plastic and epoxy resins. The government took the action based on worries that infants up to the age of 18 months might be inadvertently getting too much of the chemical, which mimics the hormone estrogen, from baby formula cans and plastic baby bottles, as well concerns that fish and other wildlife could be harmed from environmental exposure. The federal statement didn't raise concerns over adult exposure.

The Globe and Mail, October 18, 2008

Estrogen worsens ovarian cancer disease.

Estrogen regulates snail and slug in the down-regulation of E-Cadherin and induces metastatic potential of ovarian cancer cells through estrogen receptor α . New research indicates that estrogen may enhance the aggressive behavior of cancer by promoting movement of cancer cells from the ovaries to other body organs. A new cell study from researchers at the University of British Columbia, Vancouver, Canada, indicate that estrogen may be the reason cancer cells becomes aggressive and move from the ovaries to other parts of the body. Because many environmental chemicals induce the making of the natural estrogen estradiol in body tissues, these results point to a potential way

by which endocrine disruptors may contribute to the severity of ovarian cancer disease. Limiting estrogen exposure to both natural and synthetic estrogens and estrogen-mimicking compounds might be one way to stem the spread of ovarian cancer.

Park, et al., *Molecular Endocrinology*, October 17, 2008

Nicotine found to spur breast cancer growth

Nicotine, whether absorbed by smoking cigarettes or inhaling second-hand smoke, may promote tumor growth and the spread of breast cancer, a study found. Nicotine made breast cancer cells more likely to multiply and migrate in laboratory tests, according to the study published in yesterday's issue of the journal *Cancer Research*. Such evidence also suggests that nicotine given to help people stop smoking should be used cautiously. Scientists had thought for some time that the toxic, cancer-causing components of cigarettes were ingredients other than nicotine, said Michael Thun, the head of epidemiology for the American Cancer Society in Atlanta, who wasn't involved in the study. Yesterday's study adds to other recent evidence that nicotine may also play a role in cancer, he said. "Nicotine may have other adverse effects, in addition to addiction," Thun said in a telephone interview. "What it all adds up to is that the best thing you can do is avoid exposure to tobacco smoke."

Boston Globe, October 16, 2008

Indoor dust poses significant endocrine disruptor risk

The risks from exposure to outdoor pollution or sources like tobacco smoke are well known, but indoor dust can also pose health risks, especially to young children. New evidence shows that indoor dust is highly contaminated by persistent and endocrine-disrupting chemicals, including some chemicals such as polychlorinated biphenyls (PCBs) which have been banned since the 1970s. Dust collected from vacuum cleaners used in apartments and a community hall was highly contaminated with endocrine disruptors, in particular phthalates and PBDEs. The levels of PCBs were high enough in some cases to be a health concern, illustrating that these chemicals continue to persist in the environment and pose risks.

Science for Environmental Policy, October 09, 2008

First EU list of high concern chemicals agreed

A committee of member state experts has agreed a list of 14 high-concern substances whose production and use could eventually require special authorisation under the Reach regulation. This is the first group of substances to be identified as "very high concern" (SVHCs) chemicals under Reach. Nearly all substances in a draft list published by the European chemicals agency (Echa) earlier this year were approved (EED 02/07/08). These include three phthalates and the brominated flame retardant HBCDD. Chemical cyclododecane was excluded from the hit-list. A fifteenth substance, triethyl arsenate, was also added without formal committee approval. Green groups welcomed the announcement. Once the list is officially published, companies will be obliged to inform consumers within 45 days whether the high-concern substances are present in products sold on the EU market, the groups say.

ENDS Europe, October, 09, 2008

Talc use in genital area linked to increased risk for ovarian cancer

Regular use of talc in the genital area was significantly associated with an increased risk for ovarian cancer in a new analysis reported in the September issue of *Cancer Epidemiology Biomarkers and Prevention*. The researchers say that genital use of talc should be avoided. This is not a new finding — the association between genital talc use and an increased risk for ovarian cancer has been reported previously, and was confirmed in a meta-analysis of 16 studies. These latest results "provide additional support for a main effect of genital talc exposure on epithelial ovarian cancer," say the researchers. Also, the finding of highly significant trends between increasing frequency of use and risk "strengthens the evidence of an association, because most previous studies have not observed a dose response," they point out.

Medscape Medical News, October 08, 2008

Fetus 'suffers from mother's bad air'

Newborn babies who are exposed to air pollution in the womb have to breathe faster to get more oxygen into their lungs, according to research confirming environmental fumes can damage a child's lungs before birth. A study of 241 Swiss infants shows for the first time that the more pollution a pregnant woman breathes in, the more her baby will struggle for breath. Australian child health experts say the findings support recent research on Brisbane mothers and help build a case for more environmentally-friendly town planning and better efforts to avoid pollutants in pregnancy. "This is scary proof that we need to be paying a lot more attention to how we are designing our cities," said Professor Peter Sly, director of the WHO Collaborating Centre for Research on Children's Environmental Health in Perth.

The Western Australian, October 08, 2008

Let's Stop the Cancer Epidemic

Today, we're confronted with a cancer epidemic. One French person out of four will die of cancer. And quite frequently before the age of 65. I myself have been on the wrong side of the statistics since I was 31, when I discovered I had a brain tumor. Since 1940, our societies are witness to a rapid and significant increase in the most common cancers (lung, breast, prostate, colon). That is partly explained by the fact that more of us are living longer - long enough to develop cancer - and that we know more about detecting it. But those two factors only partially explain the increase in cancers. For the statistics among children and adolescents are also on the rise: by 1 to 1.5 percent annually since the 1970s. And there's the issue of cancers that we are not tracking down.

Le Monde, October 07, 2008

Exposure to chemical may affect genitals of baby boys

Baby boys are more likely to have changes in their genitals — such as undescended testicles and smaller penises — if their mothers were exposed to high levels of a controversial chemical during pregnancy, a new study shows. Virtually everyone has been exposed to the chemicals, called phthalates, which are used in countless plastic products and are found in everything from drinking water to breast milk to household dust, according to the study, published in the current issue of Environmental Research. Until recently, most studies have been conducted in animals. Those tests suggest that phthalates interfere with the male sex hormone testosterone, causing a "phthalate syndrome" in male fetuses that changes the way their genitals develop, says study author Shanna Swan, a professor at the University of Rochester School of Medicine and Dentistry.

USA Today, October 02, 2008

Response to an article entitled 'Tests for drugs in tap water'

Your article "Tests for drugs in tap water" (29 September) is an important one and touches a key public health issue. It is not only chemotherapy drugs which end up in aquatic systems: medicines for pain relief, heart drugs, the Pill and antibiotics do too. Some have biological effects at very low concentrations. Three areas need prompt consideration: improved sewage treatment, evaluation of the use of sewage sludge on farmland, and "take back" schemes whereby the general public should return all old medicines to pharmacies for correct disposal. The last is now in UK law, but the public has not been properly educated about what to do.

Jamie Page, The Cancer Prevention and Education Society, The Independent, October 01, 2008

Californians have world's highest levels of flame retardants

Californians have the world's highest levels of toxic flame retardants in their homes and in their bodies, according to new scientific findings published Wednesday. Household dust tested in Richmond and Bolinas had four to ten times more brominated flame retardants than other American homes and 200 times more than European homes. Statewide, Californians had twice as much in their blood than other U.S. residents. The lower the income, the more contaminated the homes and the people who inhabit them. The main reason for California's high exposure may be the state's flammability standard for furniture, which is the most stringent in the world. To comply, many manufacturers added chemicals called polybrominated diphenyl ethers (PBDEs) to polyurethane foam cushions for couches and chairs. "It's sobering to realize that this one well-intended regulation in California has resulted in the global contamination of a persistent toxic pollutant," said Ami Zota, a scientist at the Silent Spring Institute, a

Massachusetts-based institution, who led the study. "These chemicals have been detected in nearly every species across the globe."

Environmental Health News, October 01, 2008

Pesticide exposure as risk factor for non-Hodgkin lymphoma including histopathological subgroup analysis.

We report a population based case-control study of exposure to pesticides as risk factor for non-Hodgkin lymphoma (NHL). Male and female subjects aged 18-74 years living in Sweden were included during December 1, 1999, to April 30, 2002. Controls were selected from the national population registry. Exposure to different agents was assessed by questionnaire. In total 910 (91 %) cases and 1016 (92%) controls participated. Exposure to herbicides gave odds ratio (OR) 1.72, 95% confidence interval (CI) 1.18-2.51. Regarding phenoxyacetic acids highest risk was calculated for MCPA; OR 2.81, 95% CI 1.27-6.22, all these cases had a latency period >10 years. Exposure to glyphosate gave OR 2.02, 95% CI 1.10-3.71 and with >10 years latency period OR 2.26, 95% CI 1.16-4.40. Insecticides overall gave OR 1.28, 95% CI 0.96-1.72 and impregnating agents OR 1.57, 95% CI 1.07-2.30. Results are also presented for different entities of NHL. In conclusion our study confirmed an association between exposure to phenoxyacetic acids and NHL and the association with glyphosate was considerably strengthened.

Eriksson, et al., *Int J Cancer*, October 01, 2008

Children's environmental health: intergenerational equity in action--a civil society perspective

Since World War II, approximately 80,000 new commercial synthetic chemicals have been released into the environment, with approximately 1500 new chemicals released annually. Most of these have not been adequately tested for their impacts on human health or their particular impacts on children and the developing fetus. Yet, children are exposed to hazardous chemicals through residues in their food, indoor and outdoor air pollution, and through household products and contaminated house dust. Many of these synthetic chemicals are persistent and bio-accumulative, remaining in the human body long after exposure. Developing fetuses acquire toxic chemicals that have bioaccumulated in the mother's body and readily cross the placental barrier. Babies are now born with many man-made chemicals in their small bodies. Newborns take in more through breast milk or formula. There are no tests to assess the combined impacts of the "chemical soup" to which children are exposed. WHO, UNICEF, and UNEP have reported a growing number of children's health impacts caused by exposure to hazardous chemicals, including asthma, birth defects, hypospadias, behavioral disorders, learning disabilities, autism, cancer, dysfunctional immune systems, neurological impairments, and reproductive disorders. WHO states that approximately 3 million children under the age of five die every year due to environmental hazards, and this is not limited to developing countries. All children, both in the developing and developed world are affected by exposure to hazardous chemicals. In 2004, the European Union's Ministerial Conference on Children's Environmental Health identified air pollution, unsafe water conditions, and lead exposure as the main culprits in the death and disabling of children in Europe. The conference found that by reducing exposure to hazardous chemicals, the lives of many children could be saved. The key issues in children's environmental health and potential policy and management remedies are examined from both national (Australian) and international perspectives.

Lloyd-Smith and Sheffield-Brotherton, *Ann N Y Acad Sci*, October 01, 2008

The Precautionary Principal at work? Pesticides, soft-tissue sarcoma and non-Hodgkin lymphoma--historical aspects on the precautionary principle in cancer prevention.

BACKGROUND: After the 2(nd) World War a long range of chemical agents have been introduced on the market, both in Sweden and most other countries. From the 1950's several pesticides gained increasing use in agriculture and forestry. In the 1970's public concern increased in Sweden especially regarding use of phenoxy herbicides to combat deciduous wood, although statements from different authorities were reassuring of the safety. **MATERIALS AND METHODS:** At the end of the 1970's the author and his colleagues published the first scientific evidence of an association between exposure to phenoxyacetic acids, chlorophenols and certain malignant tumours, i.e., soft-tissue sarcoma and malignant lymphoma. The study subjects were also exposed to contaminating dioxins such as 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). Later studies showed also an association between certain persistent organic pollutants such as polychlorinated biphenyls and non-Hodgkin lymphoma (NHL) with an interaction with titers of antibodies to Epstein-Barr virus early antigen. These results have been corroborated in other studies. **DISCUSSION:** Over the years industry and its allied experts have attacked our studies, but in 1997 IARC classified TCDD as a

human carcinogen, Group I. The increasing incidence of NHL in Sweden levelled off about 1990. The author postulated that the regulation or ban of the use of chlorophenols, certain phenoxy herbicides and some persistent organic pollutants in Sweden back in the 1970s has contributed to the now decreasing incidence of NHL. Unfounded criticism from industry experts may prohibit the precautionary principle and early warnings of cancer risk can be ignored. Cancer risks by certain chlorinated phenols may serve as a model of how the precautionary principle should be used by taking early warnings seriously.

Hardell L, *Acta Oncol.* 2008;47(3):347-54.

Heterocyclic aromatic amine pesticide use and human cancer risk: Results from the U.S. Agricultural Health Study.

Imazethapyr, a heterocyclic aromatic amine, is a widely used crop herbicide first registered for use in the United States in 1989. We evaluated cancer incidence among imazethapyr-exposed pesticide applicators enrolled in the Agricultural Health Study (AHS). The AHS is a prospective cohort of 57,311 licensed pesticide applicators in the U.S., enrolled from 1993-1997. Among the 49,398 licensed pesticide applicators eligible for analysis, 20,646 applicators reported use of imazethapyr and 2,907 incident cancers developed through 2004. Imazethapyr exposure was classified by intensity-weighted lifetime exposure days calculated as [years of use x days per year x intensity level]. Poisson regression analysis was used to evaluate the relationship between imazethapyr exposure and cancer incidence. We found significant trends in risk with increasing lifetime exposure for bladder cancer (p for trend 0.01) and colon cancer (p for trend 0.02). Rate ratios (RRs) were increased by 137% for bladder cancer and 78% for colon cancer when the highest exposed were compared to the nonexposed. The excess risk for colon cancer was limited to proximal cancers, (RR = 2.73, 95% confidence intervals 1.42, 5.25, p for trend 0.001). No association was observed for prostate, lung, rectum, kidney, oral, pancreas, lymphohematopoietic cancers or melanoma. These findings provide new evidence that exposure to aromatic amine pesticides may be an overlooked exposure in the etiology of bladder and colon cancer. The use of imazethapyr and other imidazolinone compounds should continue to be evaluated for potential risk to humans.

Koutros, et al., *Int J Cancer*, September 24, 2008

Occupational exposure to pesticides and risk of adult brain tumors.

The authors examined incident glioma and meningioma risk associated with occupational exposure to insecticides and herbicides in a hospital-based, case-control study of brain cancer. Cases were 462 glioma and 195 meningioma patients diagnosed between 1994 and 1998 in three US hospitals. Controls were 765 patients admitted to the same hospitals for nonmalignant conditions. Occupational histories were collected during personal interviews. Exposure to pesticides was estimated by use of a questionnaire, combined with pesticide measurement data abstracted from published sources. Using logistic regression models, the authors found no association between insecticide and herbicide exposures and risk for glioma and meningioma. There was no association between glioma and exposure to insecticides or herbicides, in men or women. Women who reported ever using herbicides had a significantly increased risk for meningioma compared with women who never used herbicides (odds ratio = 2.4, 95% confidence interval: 1.4, 4.3), and there were significant trends of increasing risk with increasing years of herbicide exposure (p = 0.01) and increasing cumulative exposure (p = 0.01). There was no association between meningioma and herbicide or insecticide exposure among men. These findings highlight the need to go beyond job title to elucidate potential carcinogenic exposures within different occupations.

Samanic, et al., *Am J Epidemiol*, April 15, 2008

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www.EnvironmentalHealthNews.org