

NEWS ABOUT THE ENVIRONMENT AND CANCER

Quarter 1 News (January - March 2009)

Prostate cancer as an environmental disease: An ecological study in the French Caribbean islands, Martinique and Guadeloupe

Using a transdisciplinary methodological approach we have conducted a multifactorial analysis in Martinique and Guadeloupe in order to elucidate the aetiology of prostate cancer. In 2002, world age standardized rates of prostate cancer were 152 new cases per 100,000 person-years in the two islands; one of the highest worldwide rates and much higher than those reported for other Caribbean islands and metropolitan France. Using a linear regression analysis, we found that the growth curves of incidence rates for Martinique and metropolitan France have been significantly diverging since 1983. That these curves are not parallel suggests that although a Caribbean genetic susceptibility factor may be involved in carcinogenesis, this factor cannot per se account for the observed growing incidence. On the basis of mapping analysis of soil pollution, we further showed that water contamination by pesticides originates from banana plantations. Moreover, we have established retrospectively that general population subjects investigated in 1972 in Martinique for the presence of organochlorinated pesticides in their adipose tissue had been contaminated by extremely high levels of DDT, DDE, alpha, beta and gammaHCH, aldrin and dieldrin. Our study leads to the conclusion that the growing incidence of prostate cancer cannot be related either to a modification of ethnographic factors nor to a change in lifestyle and therefore suggests that environmental factors such as the intensive and prolonged exposure to carcinogenic, mutagenic and reproductive toxin pesticides may cause prostate cancer.

Int J Oncol. 2009 Apr;34(4):1037-44, Belpomme *et al.*

Ovulation induction linked with cancer risk

Treatments used to induce ovulation appear to increase the overall risk of cancer, the results of a study published in the American Journal of Epidemiology suggest. "Ovulation-inducing drugs are widely used for ovarian follicle stimulation, either as independent therapies or during in vitro fertilization cycles," Dr. Ronit Calderon-Margalit, of Hadassah-Hebrew University, Jerusalem, Israel, and colleagues explain. "The scientific literature provides inconsistent information on the association between ovulation induction treatment and cancer incidence." To investigate further, the researchers examined data from 15,030 women enrolled in the Jerusalem Perinatal Study who gave birth between 1974 and 1976 and then participated in a postpartum survey. The women were linked with the Israel Cancer Registry to obtain information on the number of cancers diagnosed through 2004.

A total of 1,215 women developed cancer. The 567 women who received drug treatment to induce ovulation had a 36-percent increased risk of developing cancer at any site. Treatment with ovulation-inducing drugs was not associated with ovarian cancer, but increased the risk of breast cancer by 42 percent; uterine cancer risk by more than 3-fold, and the risk of non-Hodgkin lymphoma by about 2.5-fold. Treatment with the ovulation-inducing drug clomiphene specifically was associated with 4.6-times the risk of uterine cancer and 2.6-times the risk of malignant melanoma.

Reuters, March 24, 2009

Breast cancer naivety ignores the toxic reality

I DON'T, as a general rule, give money to medical charities. Living in one of the world's richest countries (current economic woes notwithstanding), I'm wondering why I should be baking cupcakes for sick kids, or bungee jumping to help those suffering from the latest high-profile disease. Health should be a strategic government responsibility that's properly funded. It unnerves me to think that as well-meaning volunteers, we are being encouraged to get involved with the detail of running such services, whether it's fundraising for a state-of-the-art piece of medical equipment or paying for new curtains to cheer up patients in the hospice. Isn't this what I pay my taxes for? After all, this isn't the Congo or Haiti.

I do give money to less popular, mainly foreign causes. As a British citizen, I am not morally or fiscally obliged to contribute towards rape counselling services in Darfur, blood packs for Gaza, mosquito nets in Mozambique or the prevention of soil erosion in Nepal, but I am happy to do so, providing that the charity in question is a campaigning one which draws attention to the roots of the problem as well as the suffering it causes. I have - dare I say it? - a particular problem with many breast cancer charities. I'd pay more attention to the bras worn

over tops if these organisations were focused on primary prevention, and by that I don't mean early detection and access to the best treatments available.

Maybe I missed it, but I don't hear them talking loudly enough about the environmental roots of the disease. Aren't we being slow learners here? In our daily lives we are constantly exposed, perfectly legally, to a cocktail of hundreds of toxic and hormone-disrupting chemicals which both common sense and science suggest are heavily implicated in ever-rising rates of the disease.

Awash with pink ribbons, we remain naive about the causes of breast cancer. We stump up without a murmur for lump-in-the-throat appeals to fund more research into the disease when the most obvious causes are staring us in the face. Our food contains residues of pesticides that are known carcinogens, but the government blithely assures us that these are at oxymoronic "safe" levels. Full article:

http://www.sundayherald.com/oped/opinion/display.var.2497001.0.breast_cancer_naivety_ignores_the_toxic_reality.php

Sunday Herald, March 24, 2009

CSI-style tools offer clues about flame retardants in dust

Two new papers published in ES&T provide the first evidence that computers, TVs, and other electronic products, as well as textiles, can slowly degrade over time to produce tiny plastic fragments containing relatively high concentrations of bromine. The work is significant because it sheds light on the mystery of how brominated flame retardants get into indoor dust, which humans can inhale. Over the past few years, scientists have amassed data confirming that the brominated flame retardants used in plastic and fabric consumer goods are found in the air and dust in people's homes, workplaces, and automobiles. At least seven retardants have been documented in indoor air and dust from North America, Europe, and Asia. Researchers have definitively linked the levels of one widely used class of retardants, PBDEs, in homes' dust with PBDE concentrations found in the residents' breast milk.

Environ. Sci. Technol., (DOI: 10.1021/es900669w)

EU completes 16-year pesticide review

Detailed human health and environmental risk assessment of some 1,000 active substances authorised for use in pesticides before 1991 has led to the removal of more than two thirds of them from the market. The risk assessment review evaluated each substance with respect to the health of consumers, farmers, groundwater and non-target organisms, such as birds, mammals, earthworms and bees. According to the European Commission, there were around 1,000 active substances contained in tens of thousands of products on the market when the review was launched in 1993. The review has led "to the removal from the market of more than two thirds of these substances," said Health Commissioner Androulla Vassiliou, presenting the final results last week.

EurActiv, March 16, 2009

U.S. lawmakers move to ban BPA from food, beverage containers

Leaders from the House of Representatives and the Senate on Friday announced legislation to establish a federal ban on bisphenol A in all food and beverage containers. The bills, which Rep. Edward Markey (D-Mass.) and Sens. Dianne Feinstein (D-Calif.) and Chuck Schumer (D-N.Y.) plan to introduce, greatly expand efforts to limit use of the chemical in products for babies and children. The move comes a day after Sunoco, the gas and chemical company, sent word to investors that it was now refusing to sell bisphenol A, commonly known as BPA, to companies for use in food and water containers for children younger than 3. Sunoco told investors it could not be certain of the compound's safety. Last week, six baby bottle manufacturers, including Playtex and Gerber, announced that they would stop using BPA.

Journal Sentinel, March 13, 2009

Can anti-perspirants harm women's breasts? New study links deodorants to breast lumps

Carol Bailey was excitedly preparing for a romantic holiday with her boyfriend when she suddenly discovered, to her horror, a series of small, but growing, lumps which appeared in her armpits over the space of a few days. Convinced she had a fast-spreading form of breast cancer, she rushed to her GP. The lumps were removed and taken away for laboratory analysis. Although the doctor had assured her that cancer tumours could not appear that fast, Carol was not convinced. She spent the whole of her two-week break oblivious to the sunshine and scenery around the couple's holiday cottage on the Cornish coast. 'I was just desperate to get home and get the

results of the tests,' she said. 'I couldn't really think about anything else. I was absolutely terrified that I had cancer and was going to die.' Thankfully, she did not have breast cancer, but she was suffering from something that was in some ways almost as sinister. Although 45,000 women are diagnosed with breast cancer every year, many hundreds of thousands more, like Carol, go through the agony of investigation of lumps in the breast and underarm which turn out not to be cancerous at all.

Daily Mail, March 10, 2009

Use of wireless phones and tumor diseases

During recent years there has been increasing public concern on potential cancer risks from microwave emissions from wireless phones. We evaluated the scientific evidence for long-term mobile phone use and the association with certain tumors in case-control studies, mostly from the Hardell group in Sweden and the Interphone study group. Regarding brain tumors the meta-analysis yielded for glioma odds ratio (OR)=1.0, 95% confidence interval (CI)=0.9-1.1. OR increased to 1.3, 95% CI=1.1-1.6 with 10 year latency period, with highest risk for ipsilateral exposure (same side as the tumor localisation), OR=1.9, 95% CI=1.4-2.4, lower for contralateral exposure (opposite side) OR=1.2, 95% CI=0.9-1.7. Regarding acoustic neuroma OR=1.0, 95% CI=0.8-1.1 was calculated increasing to OR=1.3, 95% CI=0.97-1.9 with 10 year latency period. For ipsilateral exposure OR=1.6, 95% CI=1.1-2.4, and for contralateral exposure OR=1.2, 95% CI=0.8-1.9 were found. Regarding meningioma no consistent pattern of an increased risk was found. Concerning age, highest risk was found in the age group <20 years at time of first use of wireless phones in the studies from the Hardell group. For salivary gland tumors, non-Hodgkin lymphoma and testicular cancer no consistent pattern of an association with use of wireless phones was found. One study on uveal melanoma yielded for probable/certain mobile phone use OR=4.2, 95% CI=1.2-14.5. One study on intratemporal facial nerve tumor was not possible to evaluate due to methodological shortcomings. In summary our review yielded a consistent pattern of an increased risk for glioma and acoustic neuroma after >10 year mobile phone use. We conclude that current standard for exposure to microwaves during mobile phone use is not safe for long-term exposure and needs to be revised.

Pathophysiology, Hardell *et al.*, March 04, 2009

Cell Phone Link to Tumors? "We Don't Know"

Tired of waiting for Interphone? Thanks to Professor Bruce Armstrong, you can now get a good idea of what the final results will show. A world-class epidemiologist and the head of the Australian Interphone study team based at the University of Sydney, Armstrong has combined all the available results published to date and, in a 45-minute lecture, reviews and interprets the potential tumor risks. His meta-analysis includes the as-yet unpublished Australian Interphone data.

In a nutshell, Armstrong finds that there are "suggestions" of an increased risk of brain tumors among long-term users. He advocates a policy of precaution, especially for children and recommends that RF health research continue. Armstrong's fundamental message is "we don't know" what the cancer risks really are. This is different from what we've heard in the past. Back in 2000, the Stewart panel in the U.K. also recommended caution, more out of recognition of our collective ignorance than any hard data. Armstrong is saying there is now a basis to support such concerns. Yes, the risks are uncertain and ambiguous, but the possibility that using a cell phone could lead to a tumor is no longer hypothetical. The risks may be small or they may be large, but the risks are there. Armstrong, an Interphone insider, has changed the conversation.

Microwave News, March 09, 2009

Cancer Prevention Network Warns of Growing Incineration Trend in Canada

Prevent Cancer Now (PCN), a Canada-wide network to eliminate preventable causes of cancer, launched a new website (www.PreventCancerNow.ca) today to provide communities across Canada facing incineration proposals with a resource toolkit to fight the dangerous technology. Incinerators emit hundreds of pollutants to our air, land and water every single day, including cancer-causing agents that build-up in our bodies. Health Canada states that the large-scale burning of municipal and medical waste is the biggest source of dioxins and furans. "We need a comprehensive cancer prevention strategy that phases out and eliminates known carcinogens like dioxins - not allow their increased production," stated Diana Daghofer, PCN Chairperson. "That's why we've taken this action. Governments aren't providing leadership on this issue - so we will," added Daghofer.

CNW Group, March 06, 2009

Four chemicals used in consumer products slapped with toxic label

The federal government on Friday declared four chemicals widely used in paints, varnishes, stains and industrial cleaners as toxic to human health, paving the way for their possible ban in products. The chemicals are reproductive or developmental toxins and the third is a carcinogen. They can also be used in nail polish, printing inks, artist materials and grout products. One of the chemicals is used in some hairsprays, skin creams and as a fragrance ingredient, according to Health Canada. Another chemical is not used in cosmetics, but may be present as an impurity in some consumer products, such as nail polish remover and hair products, the department said. "This is an important step towards further protecting the health of Canadians and our environment," Health Minister Leona Aglukkaq said in a statement.

Canwest News, March 06, 2009

Excerpt from latest World Cancer Report

"Also important is the potential cancer burden from exposure to hundreds of probable and possible human carcinogens that have been identified and from thousands of new chemicals that have not been tested for their cancer potential. Little is known about risks from combinations of exposures at levels found in the environment or from exposures during critical time windows of development or in susceptible populations. Cancers may have multiple causes, so that environmental factors may contribute to cancers that are attributed to occupational or lifestyle factors. The known interactions between radon and smoking or between asbestos and smoking support the idea that individual cancers may have multiple causes. Finally, it is important to remember that environmental pollution is not only a cancer problem. Much environmental pollution can be prevented, and reducing environmental pollution can contribute to reductions in diseases other than cancer and to increases in aesthetics and in the overall quality of life."

IARC's World Cancer Report, March 03, 2009

Tumorigenic effect of some commonly used moisturizing creams

Irradiation of SKH-1 mice with UVB (30 mJ cm⁻²) twice a week for 20 weeks resulted in mice with a high risk of developing skin tumors over the next several months in the absence of further irradiation with UVB (high-risk mice). Topical applications of 100 mg of Dermabase, Dermovan, Eucerin Original Moisturizing Cream (Eucerin), or Vanicream once a day, 5 days a week for 17 weeks to these high-risk mice increased significantly the rate of formation of tumors and the rate of increase in tumor size per mouse. Additional studies indicated that treatment of high-risk mice with Dermabase, Dermovan, Eucerin, or Vanicream for 17 weeks increased the total number of histologically characterized tumors by 69% (average of two experiments; P<0.0001 in each experiment), 95% (P<0.0001), 24% (P<0.01), and 58% (P<0.0001), respectively. Topical applications of a specially designed Custom Blend cream to high-risk mice was not tumorigenic. The results indicate that several commercially available moisturizing creams increase the rate of formation and number of tumors when applied topically to UVB-pretreated high-risk mice. Further studies are needed to determine the effects of topical applications of moisturizing creams on sunlight-induced skin cancer in humans.

J Invest Dermatol. 2009 Feb;129(2):468-75

Study links organic solvents to lymphoma risk

Women exposed to organic solvents on the job face an increased risk of developing non-Hodgkin lymphoma (NHL), according to new research in the American Journal of Epidemiology. NHL is a collective term for several different types of immune-system malignancies. According to the National Cancer Institute, there were 66,120 new cases of NHL in the US in 2008, and 19,160 deaths from the disease. NHL incidence has risen by about 3% to 4% annually since the early 1970s, Dr. Tongzhang Zheng of the Yale School of Public Health in New Haven, Connecticut and colleagues note in their report. Past research has found an increased risk of NHL in occupations where people may be exposed to organic solvents, for example, pesticide application, dry cleaning, and embalming. Zheng and his team add.

Reuters, February 24, 2009

Maternal occupational exposure to extremely low frequency magnetic fields and the risk of brain cancer in the offspring.

OBJECTIVES: To examine the contribution of maternal occupational exposure to extremely low frequency magnetic fields (ELF-MF) shortly before and during pregnancy on the incidence of childhood brain tumors.
METHODS: A total of 548 incident cases and 760 healthy controls recruited between 1980 and 2002 from two Canadian provinces (Québec and Ontario) were included in this study, and their mothers were interviewed.

Quantitative occupational ELF-MF exposure in microTesla units was estimated using individual exposure estimations or a job exposure matrix. We used three metrics to analyze exposure: cumulative, average, and maximum level attained. RESULTS: Using the average exposure metric measured before conception, an increased risk was observed for astroglial tumors (OR = 1.5, 95% CI = 1.0-2.4). During the entire pregnancy period, a significantly increased risk was observed for astroglial tumors as well as for all childhood brain tumors with the average metric (OR = 1.6, 95% CI = 1.1-2.5 and OR = 1.5, 95% CI = 1.1-2.2, respectively). Based on job titles, a twofold risk increase was observed for astroglial tumors (OR = 2.3, 95% CI = 0.8-6.3) and for all childhood brain tumors (OR = 2.3, 95% CI = 1.0-5.4) among sewing machine operators. CONCLUSIONS: Results are suggestive of a possible association between maternal occupational ELF-MF exposure and certain brain tumors in their offspring.

Cancer Causes Control, Li et al., February 18, 2009

Cancer questions grow around Fermi nuclear plant

State health report shows 31 percent increase in cancer rate among young people in Monroe County since 1996. The cancer rate among people under the age of 25 in Monroe County rose at more than three times the rate of the rest of the state between 1996 and 2005, according to a report generated by the Michigan Department of Community Health (MDCH). Between 1996 and 2000, the average rate of cancer cases for this group was 18.5 cases per 100,000 people; between 2001 and 2005, the rate grew to 24.3 per 100,000. Between 1996 and 2000 the statewide rate of cancer for this group was 20.2 per 100,000; between 2001 and 2005, the rate was 21.9. Monroe is home to DTE Energy's Fermi II nuclear power plant, which became fully operational in 1988. While industry and government experts dismiss the possibility that local cancer rates are related to the nuclear plant, critics of the plant and nuclear power say more study is needed.

Michigan Messenger, February 17, 2009

Low levels of BPA raise breast cancer risk in rat offspring.

A first of its kind study shows that low dose exposure to bisphenol A (BPA) during lactation increases the chance of breast cancer in rats. Early developmental exposures can have long lasting and adverse health effects. This is the first study to show that a mother rat's exposure to BPA during lactation increases her daughter's chances of breast tumors. Rats were used in this study because of the similarity in mammary (breast) gland development with that of humans. If this study could be extended to humans, it suggests that current safety standards fail to adequately protect the public. Current standards -- which are being reevaluated -- do not take into account recent findings that pertain to health effects from very low level exposures of BPA and related endocrine disruptors.

Environmental Health News, February 16, 2009

Flame retardants travel hand to mouth on dust.

Children are at risk of eating more than they bargained for if they don't wash their hands before eating. Researchers have found that dust contaminated with chemical flame retardants called PBDEs can stick to skin and may be a significant source of human exposure to the widely used compounds. This is one of the first studies to identify dust as a major source of PBDEs and to calculate exposure levels from the dust. The findings suggests that small children -- who had 10 times the levels of the chemicals on their hands as adults -- may be at a significant risk of accumulating the chemicals from dust. Simply washing or wiping hands during the day and before meals could reduce daily exposure.

Environmental Health News, February 13, 2009

Researchers find abnormal cells in the blood years before leukemia is diagnosed

Researchers have shown that abnormal white blood cells can be present in patients' blood more than six years prior to the diagnosis of a chronic form of lymphocytic leukemia. This finding may lead to a better understanding of the cellular changes that characterize the earliest stages of the disease and how it progresses. The study, led by researchers at the National Cancer Institute (NCI), part of the National Institutes of Health, and the U.S. Food and Drug Administration, was published in the Feb. 12, 2009, issue of the New England Journal of Medicine.

NIH news release, February 11, 2009

Childhood leukemia and traffic air pollution in Taiwan: petrol station density as an indicator.

To investigate the relationship between traffic air pollution exposure and development of childhood leukemia (14 yr of age or younger), a matched case-control study was conducted using childhood deaths that occurred in Taiwan from 1996 through 2006. Data on all eligible childhood leukemia deaths were obtained from the Bureau of Vital Statistics of the Taiwan Provincial Department of Health. The control group consisted of children who died from causes other than neoplasms or diseases that were not associated with respiratory complications. The controls were pair matched to the cancer cases by gender, year of birth, and year of death. Each matched control was selected randomly from the set of possible controls for each case. Data on the number of petrol stations in study municipalities were collected from the two major petroleum supply companies, Chinese Petroleum Corporation (CPC) and Formosa Petrochemical Corporation (FPCC). The petrol station density (per square kilometer) (PSD) for study municipalities was used as an indicator of a subject's exposure to benzene and other hydrocarbons present in evaporative losses of petrol or to air emissions from motor vehicles. The subjects were divided into tertiles according to PSD in their residential municipality. The results showed that there was a significant exposure-response relationship between PSD and the risk of leukemia development in young children after controlling for possible confounders. The findings of this study warrant further investigation of the role of traffic air pollution exposure in the etiology of childhood leukemia.

J Toxicol Environ Health A. 2009;72(2):83-7, Weng *et al.*

Phthalates in Prescription Drugs, Some Medications Deliver High Doses

Until recently, most of the concern surrounding the health risks of phthalates has focused on the use of these plasticizers in toys, personal care products, food packaging, and medical equipment such as intravenous tubing. A case report in 2004 raised the possibility that certain prescription medications may also be a source of phthalate exposure for some people [EHP 112:751–753 (2004)]. That finding prompted a systematic investigation that links phthalate-containing medications with high internal exposure to these chemicals.

EHP 117:185–189; Hernández-Díaz *et al.*

Trumped Treatment? BPA Blocks Effects of Breast Cancer Chemotherapy Drugs

Widespread human exposure to the chemical bisphenol A (BPA) has resulted from its use in a diverse array of consumer products. Research on the potential health effects of BPA has focused on the chemical's ability to mimic or block natural estrogen. In animal studies, prenatal exposure to BPA increased susceptibility to mammary cancer in adulthood. However, studies of adult animals and cell cultures have had mixed results, and even less certain is how BPA might influence established breast cancer and its treatment. A new cell culture study is the first to show that BPA, at concentrations comparable to those found in the general population, reduces the efficacy of chemotherapy drugs in breast cancer cells, apparently by altering expression of proteins involved in apoptosis, or programmed cell death.

EHP 117:175–180; La Pensee *et al.*

A new window into hormone-altering chemicals

An electronic database going public on Tuesday has gathered the latest science on some of the most controversial chemicals in use today, offering a handy look into potential health effects when babies are exposed while developing in the womb. The interactive website, called "Critical Windows of Development," (<http://www.endocrinedisruption.com/prenatal.criticalwindows.overview.php>) has compiled an array of data from hundreds of scientists studying low doses of endocrine-disrupting chemicals. Theo Colborn, a scientist often credited with discovering in the early 1990s that environmental pollutants were mimicking and altering hormones, led the effort to create the database. She said her intent is to give scientists, policymakers, journalists and others immediate access to the information in a user-friendly, visually interesting way.

Environmental Health News, February 9, 2009

Marijuana may raise testicular cancer risk: study

Marijuana use may increase the risk of developing testicular cancer, in particular a more aggressive form of the disease, according to a U.S. study published on Monday. The study of 369 Seattle-area men ages 18 to 44 with testicular cancer and 979 men in the same age bracket without the disease found that current marijuana users were 70 percent more likely to develop it compared to nonusers. The risk appeared to be highest among men who had reported smoking marijuana for at least 10 years, used it more than once a week or started using it before age 18, the researchers wrote in the journal *Cancer*.

Reuters, February 09, 2009

Some workplaces may alter cancer risk

The occupation or industry in which one works may either increase or decrease risk for non-Hodgkin's lymphoma, an immune system cancer often found in middle-aged adults. An analysis of newly diagnosed non-Hodgkin's lymphoma (NHL) cases diagnosed between July 1998 and June 2000 confirms previous reports of increased risk for NHL among farmers, printers, leather workers, medical professionals, and some electronic workers, researchers report in the journal Occupational and Environmental Medicine. However, "it is not the job title or industry that causes the increased risk, but rather the specific exposures to chemical and biologic agents in the work place that may increase the risk of NHL," Dr. Maryjean Schenk told Reuters Health.

Reuters, February 05, 2009

HRT cancer connection 'confirmed'

New evidence of a link between hormone replacement therapy and a raised risk of breast cancer has been put forward by US researchers. The New England Journal of Medicine research found breast cancer risk fell sharply when women stopped taking HRT. A UK expert said a 50% drop in HRT use in recent years had probably stopped up to 1,000 breast cancer cases a year. But another group of experts said the fall in breast cancer rates may be due to other factors. The interpretation of the original 2002 "Women's Health Initiative" study, linking combined oestrogen and progesterin HRT with breast cancer, has been hotly debated. This combined version remains the most commonly-prescribed HRT in the UK. The Californian researchers said that their new findings would end debate over the link.

BBC News, February 05, 2009

Early-life Chemical Exposures Critical to Later-life Breast Cancer Risk

Report finds phthalates, BPA and other chemicals pose risk; calls for more research and stricter chemical regulation. A scientific review article published in the International Journal of Occupational and Environmental Health shows that a host of chemicals that mimic or alter the activities of natural hormones can potentially increase breast cancer risk. A companion article outlines research and policy priorities needed to better understand and regulate these endocrine-disrupting chemicals, which are found in everything from pesticides to plastics to personal care products. "The picture of breast cancer causation that emerges is complex," said Jeanne Rizzo, R.N., president of the Breast Cancer Fund, the organization that presented the articles. "While there is no single smoking gun, the trends that emerge lead us to stop asking IF there is a link between breast cancer and synthetic chemicals, and to instead ask how to act to reduce our exposure, given the strong and compelling evidence we now have."

Breast Cancer Fund Media Release, February 4, 2009

Obese cancer 'explosion' warning

The current generation of children faces a far higher risk of cancer later in life due to their unhealthy habits, a specialist has warned. Professor Kathy Pritchard-Jones said western countries should prepare for an "explosion" of weight-related cancers. The president of the European Society for Paediatric Oncology said governments should act now. An estimated 300 million adults worldwide are currently clinically obese. Professor Pritchard-Jones, based at the Institute for Cancer Research in Sutton, Surrey, made her comments to mark World Cancer Day.

BBC News, February 04, 2009

Ottawa slaps toxic designation on chemicals used in shampoos, conditioners

Two substances used to make hair feel silky declared dangerous; Ottawa can now introduce measures to control, eliminate their use. The federal government is placing on its list of toxic substances two silicon-based chemicals widely used in shampoos and conditioners, where they help give hair the silky, smooth feeling often played up in advertisements. It is the first time any country has taken such regulatory action against the substances, called D4 and D5 and found in hundreds of personal-care products ranging from deodorants to skin moisturizers. Although the chemicals have been linked to cancer and other health problems in high-dose animal experiments, Ottawa deemed typical human exposures are far too low to be a health risk. But it decided to designate the substances as dangerous based on fears they are a threat to wildlife when they get into the environment from the disposal of consumer products and from industrial releases.

Globe and Mail, February 3, 2009

Food packaging chemicals link with reduced fertility

Chemicals found in food packaging, pesticides and household items may be linked to lower fertility among women, new research has suggested. A study of 1,240 women has found that those with higher levels of perfluorinated chemicals (PFCs) in their bloodstreams tend to take longer to become pregnant than those with lower levels. The findings, from scientists at the University of California Los Angeles (UCLA), raise the prospect that exposure to the chemicals could be contributing to infertility. The study is published in the journal *Human Reproduction*. The research, however, is preliminary and needs to be repeated. There is not yet any evidence that the association between the chemicals and lower conception rates is causative.

The Times, January 29, 2009

Plasticizer related to lower hormone levels in men (Urinary metabolites of di(2-ethylhexyl) phthalate are associated with decreased steroid hormone levels in adult men).

Adult men with average amounts of phthalates in their urine had lower levels of two important hormones testosterone and oestrogen in their blood. The hormones are necessary for normal sperm production and function. This is the first study to show a relationship between phthalate levels and hormone levels in adult men. The phthalate levels "are representative of those found among the general US population," yet more research is needed to determine impacts on the men's health and fertility, say the authors. The results, though, mirror how their rodent counterparts respond to similar phthalate exposures. In the rodent studies, di(2-ethylhexyl) phthalate, or DEHP for short, suppresses testosterone levels, which essentially demasculinizes the males by altering reproductive development and function. Phthalates are used to make vinyl plastics flexible.

Environmental Health News, January, 29, 2009.

BPA stays in body longer than expected: study

Bisphenol A, a chemical used to make many hard plastic products, may stay in the body longer than previously thought. Researchers say the finding may also mean that people are ingesting the chemical from non-food sources. In Wednesday's online issue of the journal *Environmental Health Perspectives*, Dr. Richard Stahlhut of the University of Rochester's Environmental Health Sciences Center said high levels of BPA remained in the body after people in a study fasted for as long as 24 hours. In October 2008, Canada became the first country in the world to ban the import and sale of polycarbonate baby bottles containing bisphenol A, citing concerns about exposing infants to the chemical. Late last year, the U.S. Food and Drug Administration said it planned more research into the safety of BPA, but the agency indicated no immediate plans to follow Canada's curb on the chemical.

CBC News, January 28, 2009

Breathing dirty air may increase risk of diabetes

A new study led by Ohio State University researchers suggests a connection between air pollution and diabetes. The study, published online today in the journal *Circulation*, reports that dirty air makes fat mice more likely to get diabetes and raises questions about how closely pollution and Type 2 diabetes are linked in humans. The study found that air pollution exaggerates insulin resistance and fat inflammation in overfed mice exposed to either filtered air or dirty air for six months. All the mice were fed a fast-food diet before the experiment to make them obese, said lead researcher Dr. Sanjay Rajagopalan, director of vascular medicine at Ohio State University Medical Center. The National Institutes of Health paid for the research. The amount of soot in the air breathed by the mice in the pollution group was comparable to the air you'd breathe sitting behind an idling truck, he said. "We found a very, very strong exaggeration of diabetes" in the pollution group, Rajagopalan said. Much remains unanswered, but the explanation could lie inside the walls of blood vessels, where inflammation can occur. And inflammation has been linked to environmental factors, including pollution.

The Columbus Dispatch, January 19, 2009

Programmed Obesity?

Study Links Intrauterine Exposures to Higher BMI in Toddlers. To date, there have been relatively few epidemiologic studies investigating the association between intrauterine exposure to chemicals and body mass index (BMI, which characterizes weight in relation to height). Now a prospective birth cohort study in Flanders, Belgium, reveals an association between prenatal exposure to environmental pollutants and elevated BMI during the first three years of life. The study also found associations between exposures and birth weight and length.

New evidence that river pollution could be causing male fertility problems

Testosterone-blocking chemicals have been found in UK rivers for the first time in new research that strengthens the link between water pollution and rising male fertility problems. Anti-androgens, that are found in a number of medicines including cancer treatments and pesticides used in agriculture, were found in 30 rivers across England. The group of chemicals can block the male hormone and therefore reduce male fertility. Scientists found male fish are already being affected and warned that it could also be contributing to a reduction in human sperm counts, that have been falling in the last fifty years. In the past the contraceptive pill has been blamed for "feminising" male fish but levels would have to be extremely high to affect humans. However anti-androgens have been proven to affect humans in small measures and provide a much stronger link between river pollution and male fertility.

The Telegraph, January 18, 2009

Most hazardous pesticides are banned

Pesticides that are carcinogenic, mutagenic, reprotoxic or have endocrine-disrupting properties will be banned (although a derogation may be obtained. If a substance is needed to combat a serious danger to plant health, it may be approved for up to five years). Pesticides with developmental neurotoxic or immunotoxic effects are listed as "candidates for substitution" to be replaced if safer alternatives are shown to exist. MEPs successfully demanded a shorter deadline for their replacement, of three years rather than five.

HEAL/PAN Press Release, January 13, 2009

Pesticides use in public areas is to be prohibited or minimised by member states

Member States should make sure in their National Action Plans that pesticides use is prohibited or minimised in areas used by the general public or by vulnerable groups, such as parks, public gardens, sports and recreation grounds, school grounds and playgrounds and in the close vicinity of healthcare facilities

HEAL/PAN Press Release, January 13, 2009

French government bans advertising of mobiles to children

New limits will be placed on radiation levels amid fears of increased risk of cancer from phone use. New laws cracking down on children's use of mobile phones are to be introduced in France amid growing fears that they may cause cancer and other diseases. All advertising of the devices to children under 12 is to be prohibited under the legislation – announced by the Environment Minister, Jean-Louis Borloo, last week – and he will also take powers to ban the sale of any phone designed to be used by those under six. The French government will also introduce new limits for radiation from the phones and make it compulsory for handsets to be sold with earphones, so that users can avoid irradiating their heads and brains. And one of the country's largest cities last month started an advertising campaign to discourage the use of the phones by children.

The Independent, January 11, 2009

Authority Recommends Restricting Childrens' Use of Mobiles

The Radiation and Nuclear Safety Authority (STUK) has recommended restricting the use of mobile phones by children. The Authority says radiation from mobile phones could pose a health risk but that details of possible side effects remain unclear. Children tend to use mobiles for phone calls a lot more than adults, who started using them over a decade ago. STUK says the degree of risk from use cannot be fully assessed for several decades. In addition, a child's brain does not fully develop until adulthood. The authority says the use of mobiles can be restricted by encouraging children to send SMS messages rather than making calls. Parents can restrict the number and duration of calls as well as encourage the use of handsfree units. It adds that speaking in areas with poor reception such as in cars or on trains causes phones to use more power and should be avoided. STUK does not favour any prohibition of mobile phone use by children noting that a mobile is a good way of keeping in touch with parents.

YLE News (Finland), January, 7, 2009

U.S. Radiation Protection Regulations Heavily Rely on “Reference Man,” White, Male, Adult Standard but Women and Children Often get Higher Doses and are at Greater Cancer Risk

EPA tells Sen. Obama and Chairman Waxman it “does not believe in continued use of Reference Man” but has made no regulatory changes. A major new study released today shows that U.S. radiation exposure regulations and compliance assessment guidelines often fail women and children because they are based on “Reference Man,” a hypothetical 20 to 30 year old “Caucasian male”. At least three federal agencies -- the Environmental Protection Agency (EPA), Nuclear Regulatory Commission (NRC) and Department of Energy (DOE) -- still use Reference Man in radiation dose regulations and compliance assessment, including the Clean Air Act and some safe drinking water rules, despite evidence that it fails to adequately protect many groups.

Takoma Park, January 07, 2009

Report Faults U.S. Measure of Cancer Risk

Federal agencies in charge of radiation protection are struggling to revise their standards to take into account the differences in susceptibility to radiation-induced cancer among men, women and children, and, according to a report released Wednesday, are lagging in that task. The report, from the Institute for Energy and Environmental Research, said the rules were still too heavily based on “Reference Man,” a standard created by the International Commission on Radiological Protection in 1975. That standard is a 5-foot-7 (170cm), 154-pound (70Kg) man who is “Western European or North American in habitat and custom.” But the Environmental Protection Agency and the Nuclear Regulatory Commission said they now considered the average sensitivity of different groups to radiation, although the agencies were still trying to translate radiation into dose levels. In separate interviews, scientists at each agency said the difference in cancer susceptibility was one of several uncertainties, including precisely how many cancers a dose of radiation would produce.

New York Times, January 07, 2009

A New Cigarette Hazard: 'Third-Hand Smoke'

Parents who smoke often open a window or turn on a fan to clear the air of second-hand smoke, but experts now have identified another smoking-related threat to children's health that isn't as easy to get rid of: third-hand smoke. That's the term being used to describe the invisible yet toxic brew of gases and particles clinging to smokers' hair and clothing, not to mention cushions and carpeting, that lingers long after smoke has cleared from a room. The residue includes heavy metals, carcinogens and even radioactive materials that young children can get on their hands and ingest, especially if they're crawling or playing on the floor. Doctors from MassGeneral Hospital for Children in Boston coined the term "third-hand smoke" to describe these chemicals in a new study that focused on the risks they pose to infants and children. The study was published in this month's issue of the journal *Pediatrics*. "Everyone knows that second-hand smoke is bad, but they don't know about this," said Dr. Jonathan P. Winickoff, the lead author of the study and an assistant professor of pediatrics at Harvard Medical School.

New York Times, January 03, 2009

Environmental Threats to Elders' Neurologic Health

Age-related chronic diseases will put unprecedented stress on U.S. society with a near-doubling of the number of people aged 65 years and older by 2030, according to the U.S. Administration on Aging. These diseases are also complex. An October 2008 report, *Environmental Threats to Healthy Aging: With a Closer Look at Alzheimer's & Parkinson's Diseases*, now describes in greater detail how a lifetime of environmental factors from conception onward shapes our health in our later years. The report, published by the Greater Boston Physicians for Social Responsibility and the Science and Environmental Health Network, uses a broad definition of environment, encompassing the physical, biological, social, and cultural contexts in which our lives are rooted. These contexts influence biological pathways that determine various outcomes, from good health in old age to chronic health issues including cardiovascular disease, diabetes, obesity, metabolic syndrome, and neurodegenerative disorders such as Alzheimer disease (AD) and Parkinson disease (PD). The authors suggest that environmental improvements, from our diet to our access to quality health care, could reduce, delay, or someday perhaps prevent diseases associated with aging.

EHP, 117(1), January 2009

Association between prenatal exposure to phthalates and the health of newborns

Phthalates are developmental and reproductive toxicants for the fetus in pregnant rodents, and the ability of phthalates to penetrate the placenta have been reported. The aims of this study were to evaluate the association between maternal urine excretion, the exposure of fetus to phthalates in amniotic fluid, and the health of newborns. Amniotic fluid and urine samples from pregnant women were collected to measure five phthalate monoesters using liquid chromatography/tandem mass spectrometry (LC/MS-MS) and the newborns' birth weight, gestational age, and anogenital distance (AGD) were collected. The median levels of three phthalate monoesters in urine and amniotic fluid were 78.4 and 85.2 ng/mL monobutyl phthalate (MBP); 24.9 and 22.8 ng/mL mono-(2-ethylhexyl) phthalate (MEHP); 19.8 and Not Detected monoethyl phthalate (MEP). We found a significant positive correlation only between creatinine adjusted urinary MBP and amniotic fluid MBP ($R^2 = 0.156$, $p < 0.05$) in all infants and, only in female infants, a significantly negative correlation between amniotic fluid MBP, AGD ($R = -0.31$, $p < 0.06$), and the anogenital index adjusted by birth weight (AGI-W) ($R = -0.32$, $p < 0.05$). Although the influence of prenatal di-n-butyl phthalate (DBP) exposure on the endocrinology and physiology of the fetus is still a puzzle, our data clearly show that in utero exposure to phthalates in general has anti-androgenic effects on the fetus.

Environment International, 35(1): 14-20, January 2009

Many studies needed to tie genes to cancer: study

Many genes linked to various cancers do not appear to raise the risk of getting cancer after all, according to an analysis of hundreds of studies published on Tuesday. The findings highlight the need to exercise caution over the increasing number of studies associating common genetic variations with a range of diseases, said John Ioannidis of the University of Ioannina School of Medicine in Greece. The whole thing about genetic variations and links to diseases like cancer are very exciting, but the general public should be quite cautious about jumping to the conclusion that if they have a change in one gene or another they are doomed," Ioannidis, who led the study, said in a telephone interview. "Genetic effects are very complex and very subtle and we need to know a lot more before we can make strong recommendations based on genetic profiles."

Reuters, December 30, 2008

High insulin levels may increase breast cancer risk

Data from the Women's Health Initiative Observational Study show that higher than normal insulin levels are an independent risk factor for breast cancer. Study investigators, led by Dr. Marc J. Gunter at Albert Einstein College of Medicine in the Bronx, New York, examined the association between breast cancer and blood parameters at study entry in 835 women who later developed breast cancer and 816 who did not. All of the women were postmenopausal and none were diabetic at baseline. In the Journal of the National Cancer Institute, the researchers report a positive association between insulin levels and breast cancer risk, with women with the highest levels of insulin having a 46 percent greater risk than women with the lowest levels. The association between insulin and breast cancer risk varied depending on whether or not the women took hormone therapy. Upon further analysis, insulin level was linked with breast cancer risk only in those who did not use hormones.

Reuters, December 30, 2008

This information has been collated by The Cancer Prevention and Education Society www.cancerpreventionsociety.org

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