

# NEWS ABOUT THE ENVIRONMENT AND CANCER

## Quarter 2 News (April - June 2009)

### **Cosmetic chemicals linked to low birth weight**

Chemicals widely used in shampoos, toys, hairspray and cosmetics could harm the growth of unborn babies, a new study suggests. Previous studies have shown that the chemicals, called Phthalates, can have other effects on the human body, including reduced fertility in men. The new study analysed blood and other samples taken from 201 newborns, 88 of whom were born weighing less than 2,500g. Researchers found that more than seven in 10 of the babies had significant levels of the chemicals in their bodies. Those with a low birth weight had, on average, around 30 per cent higher levels of phthalates than the other children, the findings, published in the Journal Of Paediatrics show.

**Daily Telegraph, 25 June, 2009**

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### **Endocrine Society advocates the precautionary principle concerning endocrine disruptors**

The Endocrine Society, a highly respected international medical society of over 14,000 members in 100 countries, issued a seminal new report stating that exposures to endocrine disrupting chemicals are a growing threat to human health and well-being. The report explicitly states that “the precautionary principle is critical to enhancing health.” The paper also asserts that in order to prevent disease, “Our chemical policies at the local, state and national levels, as well as globally, need to be formulated, financed and implemented to ensure the best public health.” Given the stature of the Endocrine Society, as well as its “Sister Societies”, such as the American Diabetes Society and the American Obesity Society, this report sends a clear signal to other health-related professional societies as well as policymakers that we can no longer ignore environmental contributors to a wide range of diseases and disabilities—in fact, we need to take a precautionary approach on every level of decision-making.

**Endocrine Society, June 24, 2009**

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### **EU says cancer prevention needs to address environmental factors**

The European Commission's Communication on Cancer released today takes an important step forward in recognising the environmental dimension of cancer prevention, according to the Health and Environment Alliance. Historically, prevention work has predominantly focused on changing lifestyle risk factors, such as smoking and alcohol consumption. Many environmental factors, including carcinogenic chemicals, pesticides and particles in air pollution, contribute to cancer. These cancers could be prevented by changes in policy to reduce people's involuntary exposure to these chemical substances. For the first time, the Commission officially acknowledges that cancer prevention should address lifestyle, occupational and environmental causes on an equal footing.

**HEAL, June 24, 2009**

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### **Air has elevated cancer risk in 600 neighborhoods**

Millions of people living in nearly 600 neighborhoods across the country are breathing concentrations of toxic air pollutants that put them at a much greater risk of contracting cancer, according to new data from the Environmental Protection Agency. The levels of 80 cancer-causing substances released by automobiles, factories and other sources in these areas exceed a 100 in 1 million cancer risk. That means that if 1 million people breathed air with similar concentrations over their lifetime, about 100 additional people would be expected to develop cancer because of their exposure to the pollution.

**Associated Press, June 24, 2009**

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### **Want to avoid leukaemia? Don't be a female farm worker**

Of all New Zealand's occupation groups, female agricultural workers have the highest incidence of leukaemia – probably owing to their exposure to chemicals, report Massey University public health specialists. The Centre for Public Health Research has just released the analysis of a study from 2003-2004, when researchers interviewed 225 cancer patients aged 25-75 alongside 471 randomly selected kiwis. Market gardeners and nursery growers showed elevated leukaemia risk four or five times greater than the general population, while crop growers, market farmers, field crop and vegetable growers also exhibited varying degrees of elevated risk.

**More evidence links pesticides to Parkinson's**

A new study confirms the link between on-the-job pesticide exposure and Parkinson's disease, and suggests that certain insecticides may be particularly risky. Parkinson's disease is a degenerative brain condition in which dopamine-producing cells in the brain gradually die off or malfunction. Dopamine helps regulate movement, and as Parkinson's progresses, people have increasing difficulty walking, talking and performing simple tasks. The exact cause of Parkinson's is unknown, but research indicates that a combination of genetics and environmental triggers -- such as certain chemicals or viral infections -- may be a work. This latest study, published in the *Annals of Neurology*, bolsters evidence that occupational pesticide exposure may be one of those environmental triggers. French researchers found that among nearly 800 adults with and without Parkinson's, agricultural workers exposed to pesticides -- including insecticides, weed killers and fungicides -- were at greater risk of the disease.

**Reuters, June 19, 2009**

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**Antibacterial found in dolphins.**

For the first time, the popular antibacterial agent triclosan is found in the blood of a marine mammal. A bacteria-killing chemical widely used in an array of consumer products has made its way down kitchen and bathroom sinks and into dolphins living in US coastal waters. Researchers report for the first time that a marine mammal -- the bottlenose dolphin -- is accumulating triclosan from water bodies where treated sewage is released. The study examined animals from rivers, an estuary, a harbor and a lagoon in South Carolina and Florida. Triclosan is a common additive in soaps, deodorants, toothpastes and other personal care products that is included to help control bacteria and their related illnesses. It is also put into consumer products like socks, cutting boards and garbage bags to curb the growth of bacteria.

**Environmental Health News, June 18, 2009**

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**Mom's pesticide exposure at work increases her child's leukemia risk.**

Children whose mothers were exposed to pesticides at work while pregnant are at double the risk of developing childhood leukemia. A detailed analysis of all the available studies comparing work-related, parental pesticide exposure and childhood leukemia finds that the mother's exposure during pregnancy increases her child's risk of the disease. The father's exposure before pregnancy does not. The study emphasizes the significant contribution of prenatal exposure in developing childhood disease and shows a need for more in-depth studies of the effects of prenatal exposures to environmental factors.

**Environmental Health News, June 17, 2009**

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**New online tool links government food test results to pesticide toxicology science: Searchable database shows pesticide residues still common**

Ever wonder about pesticides on your food? Or in your drinking water? In particular, which of those pesticides are most hazardous? A new tool from the nonprofit group Pesticide Action Network sheds new science-driven light on the invisible problem of pesticide residues. Today's launch of the What's on My Food? database makes the results of government tests for pesticide residues in food available online in a searchable, easy-to-use format. The database shows what pesticides are found on each food, in what amount, and -- for the first time -- links those residues to the health effects associated with exposure to each of the chemicals.

**Pesticide Action Network North America, June 17, 2009**

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**More Chemicals For California's Prop 65**

State proposal may lead to warning labels on more products. In a move that would trigger state product-labeling requirements, California last week proposed to list 30 more chemicals under Proposition 65. That state law requires warnings on consumer products containing substances that the state determines can cause cancer or developmental or reproductive harm. The California Environmental Protection Agency's Office of Environmental Health Hazard Assessment proposed listing 19 substances under Proposition 65 because of concerns about developmental or reproductive harm. They include the common gasoline additive tert-amyl methyl ether, the pesticide carbaryl, and n-butyl glycidyl ether, used in epoxy resins. The agency also proposed

listing 11 other substances because of concern they could cause cancer. These include widely used chlorophenoxy herbicides; styrene, a building block of many plastics; and marine diesel fuel.

**Chemical and Engineering News, June 16, 2009**

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**American healthy homes survey: a national study of residential pesticides measured from floor wipes**

This study shows that pesticides, including some that have been banned for decades, persist in homes. Researchers wiped hard surface floors to collect dust samples from 500 homes across the US and analyzed them for insecticide residues. Most swipes were taken from kitchen floors away from heavy foot traffic and immediate cooking areas. The swipes were analyzed for 24 current and past-use residential insecticides in the organochlorine, organophosphate, pyrethroid and phenylpyrazole classes, and the insecticide synergist piperonyl butoxide. All 24 insecticides tested for were found in some of the homes. Fipronil and permethrin, both currently used, were found in 40 percent and 89 percent of homes respectively. DDT and chlordane - two pesticides that have been banned for decades - were found in 42 percent and 74 percent of homes respectively. DDE, the breakdown product of DDT, was found in 33 percent of homes. Chlorpyrifos and diazinon, both no longer permitted for residential use for several years, were detected in 78 percent and 35 percent of homes respectively.

**Environmental Science and Technology, June 15, 2009**

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**Medical group calls for reducing use of BPA**

Hormone-like chemicals in plastics, pesticides and other products pose "significant concern for public health," possibly causing infertility, cancer and malformations, a medical society announced Wednesday. There is strong evidence that chemicals that interfere with the hormone system can cause serious health problems, according to a scientific report from the Endocrine Society, now meeting in Washington, D.C. Although scientists still have many questions about the chemicals, the report says that it's important for people to take a "precautionary approach" by reducing their exposures.

**USA Today, June 11th 2009**

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**Dioxins in food chain linked to breastfeeding problems**

Dioxin exposure through the food chain during pregnancy could explain why some women have trouble breastfeeding or produce too little milk, new research suggests. A study from the University of Rochester Medical Center (URMC), in the United States, has found that contact with the toxic chemical harms the cells in rapidly changing breast tissue that occurs during pregnancy. While the results have only been demonstrated in mice so far, researchers believe their investigations may help to address an issue that affects between three and six million women worldwide.

**Food Production Daily, June 10, 2009**

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**Recycled radioactive metal contaminates consumer products**

Thousands of everyday products and materials containing radioactive metals are surfacing across the United States and around the world. Common kitchen cheese graters, reclining chairs, women's handbags and tableware manufactured with contaminated metals have been identified, some after having been in circulation for as long as a decade. So have fencing wire and fence posts, shovel blades, elevator buttons, airline parts and steel used in construction. A Scripps Howard News Service investigation has found that -- because of haphazard screening, an absence of oversight and substantial disincentives for businesses to report contamination -- no one knows how many tainted goods are in circulation in the United States.

**Scripps Howard News Service, June 03, 2009**

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**Neuroscience, molecular biology, and the childhood roots of health disparities: building a new framework for health promotion and disease prevention.**

A scientific consensus is emerging that the origins of adult disease are often found among developmental and biological disruptions occurring during the early years of life. These early experiences can affect adult health in 2 ways--either by cumulative damage over time or by the biological embedding of adversities during sensitive developmental periods. In both cases, there can be a lag of many years, even decades, before early adverse experiences are expressed in the form of disease. From both basic research and policy perspectives, confronting

the origins of disparities in physical and mental health early in life may produce greater effects than attempting to modify health-related behaviors or improve access to health care in adulthood.  
**Shonkoff, et al., JAMA. 2009 Jun 3;301(21):2252-9.**

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#### **ECHA recommends strict control for seven substances of very high Concern**

The European Chemicals Agency recommends that seven chemical substances of very high concern should not be used without specific authorisation. Three of the recommended substances are classified as toxic to reproduction, one as carcinogenic and three fulfil the criteria for being persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB). They are all used in products to which consumers and workers are exposed. The seven substances are: **musk xylene**, a fragrance enhancer, **4,4'-diaminodiphenylmethane – MDA**, a hardener, **short chained chlorinated paraffins – SCCPs**, a flame retardant and/or plasticiser; **hexabromocyclododecane – HBCDD**, a flame retardant; **bis(2-ethylhexyl)phthalate – DEHP**, a plasticiser; **benzylbutylphthalate – BBP**, a plasticiser; **dibutylphthalate – DBP**, a specialist plasticiser.

**European Chemicals Agency, June 02, 2009**

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#### **Teen soy intake linked to lower breast cancer risk**

High intakes of soy during adolescence may reduce the risk of breast cancer before the menopause by about 40 per cent, according to new data. The risk of pre-menopausal breast cancer were also reduced by 59 per cent for adults with the highest soy protein intake, and by 56 per cent for adults with the highest average isoflavone intakes, according to findings from a study with 73,223 Chinese women participating in the Shanghai Women's Health Study. Population studies have shown that a diet rich in soy is associated with fewer cases of breast cancer, linked to the presence of soy isoflavones. China has the world's lowest incidence and mortality from breast cancer - a disease that has over one million new cases every year worldwide.

**Nutra, June 01, 2009**

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#### **Estrogen-like endocrine disrupting chemicals affecting puberty in humans - a review**

Estrogen-like endocrine disrupting chemicals (EEDC) are exogenous, man-made chemicals that alter the functions of the endocrine system and cause various health defects by interfering with the synthesis, metabolism, binding or cellular responses of natural estrogens. EEDCs have been found in various plastic products, flame retardants, pesticides and many other products that are needed for daily use. Some of the greatest effects of EEDCs are on puberty, a period of rapid physiological changes like growth spurt, maturation of the gonads and the brain. Estrogen, one of the key hormones required in puberty is crucial for the sexual differentiation. The structural similarity of estrogen disruptors with estrogen allow them to bind and activate estrogen receptors and show a similar response even in the absence of estrogen that can lead to precocious puberty (PP). Major EEDCs found abundantly in our environment include; dichlorodiphenyltrichloroethane (DDT), dioxin, polychlorinated biphenyls (PCBs), bisphenol A (BPA), polybrominated biphenyls (PBB), phthalate esters, endosulfan, atrazine and zeranol. In girls, DDT has been linked to earlier menarche. Dioxin causes abnormal breast development in pre-pubertal girls. BPA has shown to cause PP in pubertal girls. PBB causes earlier menarche, thelarche and earlier pubic hair stage in pubertal girls. PCB's showed a significant delay in puberty in pubertal boys. De-feminization, thelarche, or early secondary breast development are shown in pubertal girls when exposed to phthalate esters. Endosulfan affects pubertal boys by slowing down the timing of reproductive maturation. This article provides a possible structure-function relation of the above mentioned EEDCs which interfere with sexual development during puberty.

**Roy JR, et al., Med Sci Monit. 2009 Jun;15(6):RA137-145.**

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#### **Argentina pressed to ban crop chemical after health concerns**

Argentina's government is coming under pressure to ban the chemical used in the world's best-selling herbicide, which has helped turn the country into an important world food exporter in the past decade, after new research found that it might be harmful to human health. A group of environmental lawyers has petitioned the Supreme Court to impose a six-month ban on the sale and use of glyphosate, which is the basis for many herbicides, including the US agribusiness giant Monsanto's Roundup product.

**Financial Times, May 29 2009**

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### **Herbicide Exposure Linked to Pancreatic Cancer**

Two commonly used herbicides, pendimethalin and EPTC, show a statistically significant exposure-response association with pancreatic cancer. The new study, "Agricultural Pesticide Use And Pancreatic Cancer Risk In The Agricultural Health Study Cohort," published earlier this month in the International Journal of Cancer, is a case-control study of pesticide applicators and their spouses in Iowa and North Carolina. After controlling for age, smoking and diabetes, the study finds a three-fold increased risk with lifetime pendimethalin use and a two and-a-half-fold increased risk with lifetime use of EPTC when compared to those that never used the chemicals. Among the 24 pesticides examined, having ever used one of five pesticides (trifluralin, chlorimuron-ethyl, pendimethalin, EPTC or heptachlor) shows at least a 40 percent excess risk of pancreatic cancer.

**Beyond Pesticides, May 28, 2009**

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### **Scientists Convene to Discuss New Method to Study How Toxic Chemicals Impact Human Health**

More than 200 scientists, regulators, and policy makers from around the world convened recently at EPA's first ToxCast Data Analysis Summit to discuss results of the first phase of ToxCast. ToxCast is an innovative approach for profiling how chemicals in our environment impact important biological pathways that are critical for the function of the body's systems such as the heart, lungs, brain or reproductive organs. EPA launched the ToxCast research program in 2007 to develop a cost-effective approach for prioritizing the toxicity testing of large numbers of chemicals in a short period of time. This new approach to determining how toxic chemicals could impact human health uses cutting-edge biological tests to determine how chemicals affect cellular functions. ToxCast will help EPA determine under what conditions environmental exposures pose risks to human health.

**U.S. Environmental Protection Agency, May 28, 2009**

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### **Meat intake not linked to breast cancer**

A large study has found no link between eating meat -- total meat, red meat, processed meat, or meat cooked at high temperatures -- and the risk of breast cancer in older women. Some studies have found that women who eat a lot of red and processed meat are more likely to develop breast cancer than other women; but other studies have found no such link. Saturated fat, found mainly in animal products, has been tied to higher breast cancer risk in some studies, but not in others. The current findings stem from 120,755 postmenopausal women who participated in the NIH-AARP Diet and Health Study. The women provided information on what they ate and how often they ate certain foods when they entered the study between 1995 and 1996. They also provided information on meat-cooking methods.

**Reuters, May 25, 2009**

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### **Drinking from plastic bottles 'increases exposure to gender-bending chemical'**

Scientists have demonstrated for the first time that polycarbonate containers release the chemical bisphenol A (BPA) into liquid stored in them. BPA has been shown to interfere with reproductive development in animals and has been linked with cardiovascular disease and diabetes in humans. New research by Harvard School of Public Health found that participants who drank for a week from polycarbonate bottles showed a two-thirds increase of BPA in their urine. Experts warned that babies are at greater risk, because heating baby bottles increases the amount of BPA released, and the chemical is potentially more harmful to infants.

**Daily Telegraph, May 22, 2009**

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### **Gender-bending chemical timebomb fear for boys' fertility**

Chemicals in food, cosmetics and cleaning products are 'feminising' unborn boys and raising their risk of cancer and infertility later in life, an expert warns today. Professor Richard Sharpe, one of Britain's leading reproductive biologists, says everyday substances are linked to soaring rates of birth defects and testicular cancer, and to falling sperm counts. The government adviser's report published today is the most detailed yet into the threat posed to baby boys by chemicals that block the action of the male sex hormone testosterone, or mimic the female sex hormone oestrogen. Doctors are concerned about rising levels of birth defects, with 7 per cent of British boys born with partially descended testes and seven in 1000 with malformed genitals. The latest estimates indicate that one in six men in the UK has a low sperm count and will struggle to father a child. And the number of testicular cancer cases among men in their 20s and 30s has been doubling every 25 years.

**Daily Mail, May 13, 2009**

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**Authors discover toxins in 'off-the-shelf' products increase quickly**

OTTAWA -- After steering clear of food packaging containing bisphenol A for a couple of days, Rick Smith saw the levels of the hormone-disrupting chemical linked to breast and prostate cancer in his body increase 7.5 times after just two days of restricting his diet to canned foods heated in a microwave using a polycarbonate plastic container. The BPA test, showing an "immediate and dramatic increase" in the "harmful toxin," was one of four involving pollutants found in consumer products unveiled Sunday, showing an increase in levels of up to 2,900 times after short-term, regular-use exposure.

**Canwest News Service, May 10, 2009**

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**Are infection control measures contributing to antibiotic resistance?**

New research suggests products being used in hospitals to prevent the spread of bacteria could in fact be accelerating the development of antibiotic- and biocide-resistant strains. Biocides, which are active in many disinfectants used in hospitals and health care environments - in particular triclosan and quaternary ammonium compounds - act on bacteria in a similar way to antibiotics. They do this by activating efflux pumps in the membranes of bacterial cells. The pumps are natural protection mechanisms that remove unwanted substances out of the cell. Low level exposure to biocides increases the activity of efflux pumps, meaning bacteria are also increasingly able to resist the effects of antibiotics.

**Health and Environment No.14, May 2009**

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**Sleeping with the enemy: indoor airborne contaminants.**

New research studying household air in homes in Arizona found more than 400 chemicals ranging from pesticides to phthalates, confirming that indoor air can be heavily contaminated with pollutants. Pesticides, including diazinon, chlorpyrifos and DDT were found at surprisingly high levels, as were phthalates. The study was carried out by Gale et al., entitled "Semivolatile organic compounds in residential air along the Arizona - Mexico border."

**Environmental Science and Technology, Apr 28, 2009**

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**Child cancer deaths led by brain tumours**

Brain tumours are the leading cause of childhood cancer deaths in Britain, with half as many more children dying from the illness as from leukaemia. Figures from the Office of National Statistics show that in 2007 there were 47% more deaths from brain tumours among under-15s than from leukaemia. Yet that is not reflected in the money spent on research, say campaigners. This week sees the launch of Brain Tumour Research, a national coalition of 14 charities, which believe that research is "woefully underfunded". It is backed by celebrities including the actress Sheila Hancock, whose grandson survived a tumour, and actor Martin Kemp and opera singer Russell Watson, who were both treated successfully. Hancock, 76, the widow of actor John Thaw, saw her grandson Jack diagnosed with a rare tumour aged four. "It is terrible to watch a grandchild go through the diagnosis and treatment of a brain tumour. You feel so helpless." Jack was successfully operated on. Kevin O'Neill, a consultant neurosurgeon at Imperial College London, said: "Brain tumours are on the increase, reportedly in the region of 2% per year. But in my unit we have seen the number of cases nearly double in the last year."

**The Guardian, April 26, 2009**

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**Drowning in plastic: The Great Pacific Garbage Patch is twice the size of France.**

There are now 46,000 pieces of plastic per square kilometre of the world's oceans, killing a million seabirds and 100,000 marine mammals each year. So how do we turn the tide? Nearly all the plastic items in our lives begin as these little manufactured pellets of raw plastic resin, which are known in the industry as nurdles. More than 100 billion kilograms of them are shipped around the world every year, delivered to processing plants and then heated up, treated with other chemicals, stretched and moulded into our familiar products, containers and packaging. During their loadings and unloadings, however, nurdles have a knack for spilling and escaping. They are light enough to become airborne in a good wind. They float wonderfully and can now be found in every ocean in the world, hence their new nickname: mermaids' tears. You can find nurdles in abundance on almost any seashore in Britain, where litter has increased by 90 per cent in the past 10 years, or on the remotest uninhabited Pacific islands, along with all kinds of other plastic confetti.

**Daily Telegraph, April 24, 2009**

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**Group says flea collars for pets endanger kids**

Some cat and dog flea collars leave chemicals on fur that are hazardous to the pets and their owners, in violation of California's anti-toxics laws, according to a national environmental group's lawsuit Thursday. The Natural Resources Defense Council urged federal regulators to remove the products from the market. Two chemicals in the pet collars left residue sufficient to pose the risk of cancer and neurological damage to children - as much as 1,000 times higher than levels established by the U.S. Environmental Protection Agency, the group said. "Just because a product is sold in stores doesn't mean it's safe," said Dr. Gina Solomon, a physician and a toxicologist with the environmental group and an author of the study.

**San Francisco Chronicle, April 24, 2009**

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**Parkinson's Linked to Pesticides**

Researchers have found a link between pesticide exposure and some cases of Parkinson's disease. The Los Angeles Times reported that University of California researchers said that "strong new evidence" has found an association between the neurodegenerative disorder and pesticides. Duke University researchers said, "Further investigation of these specific pesticides and others may lead to identification of pertinent biological pathways influencing Parkinson's disease development," reported Reuters.

**Newsinferno.com, April 20th, 2009**

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**AP IMPACT: Tons of released drugs taint US water**

U.S. manufacturers, including major drugmakers, have legally released at least 271 million pounds of pharmaceuticals into waterways that often provide drinking water - contamination the federal government has consistently overlooked, according to an Associated Press investigation. Hundreds of active pharmaceutical ingredients are used in a variety of manufacturing, including drugmaking: For example, lithium is used to make ceramics and treat bipolar disorder; nitroglycerin is a heart drug and also used in explosives; copper shows up in everything from pipes to contraceptives. Federal and industry officials say they don't know the extent to which pharmaceuticals are released by U.S. manufacturers because no one tracks them - as drugs. But a close analysis of 20 years of federal records found that, in fact, the government unintentionally keeps data on a few, allowing a glimpse of the pharmaceuticals coming from factories in Ohio and other states.

**Associated Press, April 19, 2009**

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**Child Obesity Is Linked to Chemicals in Plastics**

Exposure to chemicals used in plastics may be linked with childhood obesity, according to results from a long-term health study on girls who live in East Harlem and surrounding communities that were presented to community leaders on Thursday by researchers at Mount Sinai Medical Center. The chemicals in question are called phthalates, which are used to make plastics pliable and in personal care products. Phthalates, which are absorbed into the body, are a type of endocrine disruptor — chemicals that affect glands and hormones that regulate many bodily functions. They have raised concerns as possible carcinogens for more than a decade, but attention over their role in obesity is relatively recent.

**New York Times, April 17, 2009**

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**Five members of the French Senate present a bill restricting EMF exposure**

Reasons why the bill is required: Wireless technologies are being rolled out without any coordinated study of the health risks. The French constitution stipulates in its first article: "Everyone has the right to live in a safe environment respectful of health". Do we have to wait for another health disaster? There is already a long list of environmental and health alerts which public authorities chose to ignore: asbestos, lead, dioxins, mercury, glycol ethers, radioactive pollution. All these cases prove that ignoring an early alarm call exposes the public to catastrophic multiple consequences. By anticipating health effects, a long cortege of victims, social and environmental repercussions and costs could have been avoided.

**Radiationresearch.org, April 17, 2009**

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**EPA will test pesticides' effect on endocrine system.**

The EPA announced today it will order pesticide manufacturers for the first time to test 67 chemicals contained in their products to determine if they disrupt the endocrine system, which regulates both animals' and humans' growth, metabolism and reproduction. Researchers have raised concerns that chemicals released into the environment are interfering with animals' hormone systems, citing problems such as male fish in the Potomac River that are growing eggs. The chemicals, known as endocrine disruptors, may interfere with the hormones that humans and animals produce or secrete.

**Washington Post, April 16, 2009**

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### **BPA Implicated in Health Problems, US Report Says**

Bisphenol A, or BPA—a fairly ubiquitous chemical used in polycarbonate plastic products, including baby bottles and metal can coatings could be linked to a range of hormonal problems—according to a recent and preliminary government report developed by a group of scientists from the Centers for Disease Control (CDC), the Food and Drug Administration (FDA), and the Institutes of Health (NIH). The federal National Toxicology Program said experiments on rats found precancerous tumors, urinary tract problems, and early puberty when animals were fed or injected with low doses of BPA. The report claims that while such studies provide “limited evidence” of BPA’s risks, the effects on humans “cannot be dismissed.”

**Newsinferno.com, April 16th, 2008**

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### **Health Canada makes it official: BPA is health hazard**

Canada on Saturday will become the first country to formally declare bisphenol A hazardous to human health and officially inform the baby-product industry it will no longer be able to use the chemical in baby bottles. Canada's announcement comes six months after Health Minister Tony Clement surprised the chemical industry by announcing the government's plan to place bisphenol A on its list of toxic substances and ban its use in baby bottles. In unveiling the "precautionary and prudent" move, Clement proposed a limited ban of the widely used chemical, also found in hard plastic sports bottles and the lining of food cans. Most Canadians "need not be concerned" about the health effects of bisphenol A, Clement said at the time. "This is not the case for newborns and infants." The government's final decision will appear in the Canada Gazette, which publishes the official regulations of the government.

**Canwest News Service, April 15, 2009**

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### **Parkinson's disease and residential exposure to maneb and paraquat from agricultural applications in the central valley of California.**

Evidence from animal and cell models suggests that pesticides cause a neurodegenerative process leading to Parkinson's disease (PD). Human data are insufficient to support this claim for any specific pesticide, largely because of challenges in exposure assessment. The authors developed and validated an exposure assessment tool based on geographic information systems that integrated information from California Pesticide Use Reports and land-use maps to estimate historical exposure to agricultural pesticides in the residential environment. In 1998-2007, the authors enrolled 368 incident PD cases and 341 population controls from the Central Valley of California in a case-control study. They generated estimates for maneb and paraquat exposures incurred between 1974 and 1999. Exposure to both pesticides within 500 m of the home increased PD risk by 75% (95% confidence interval (CI): 1.13, 2.73). Persons aged < or =60 years at the time of diagnosis were at much higher risk when exposed to either maneb or paraquat alone (odds ratio = 2.27, 95% CI: 0.91, 5.70) or to both pesticides in combination (odds ratio = 4.17, 95% CI: 1.15, 15.16) in 1974-1989. This study provides evidence that exposure to a combination of maneb and paraquat increases PD risk, particularly in younger subjects and/or when exposure occurs at younger ages.

**Costello et al., Am J Epidemiol. April 15, 2009**

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### **When farm sprays go astray**

When fisheries veterinarian Matthew Landos got his first look at the double-headed fish embryos in a Queensland hatchery, he had no idea he would soon team up with a Tasmanian doctor worried that the widespread use of agricultural and forestry chemicals was making her patients sick. "In hindsight it makes perfect sense. If exposure to agricultural chemicals could cause deformed and dying fish, as the evidence suggests, of course the chemicals had the potential to trigger serious health problems with other animals, including people," says Landos, who runs a consulting practice called Future Fisheries Veterinary Services and is a research associate and honorary lecturer with the University of Sydney.

Late last year hatchery owner Gwen Gilson hired Landos to find out why - after years of healthy hatchings - embryos and fish fry were dying in huge numbers, while others showed bizarre physical or behavioural abnormalities. His investigation suggested the problem was the result of a cocktail of chemicals sprayed on a nearby macadamia plantation. Pathology reports on Gilson's fish, written by Roger Chong of Queensland's Biosecurity Sciences Laboratory, backed Landos's conclusion. It revealed the deaths, deformities and behavioural abnormalities of fish and fish fry were consistent with exposure to the types of agrichemicals used to treat macadamia trees.

**The Australian, April 11, 2009**

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#### **Pesticides blamed for some childhood brain cancers.**

Parental exposure to pesticides and childhood brain cancer: United States Atlantic Coast Childhood Brain Cancer Study.

Little is known conclusively about what causes brain cancer in children, but research studies are consistently finding links to prebirth pesticide exposure. A new study finds that children who live in homes where their parents use pesticides are twice as likely to develop brain cancer versus those that live in residences in which no pesticides are used. Herbicide use appeared to cause a particularly elevated risk for a certain type of cancer. It is well established that many pesticides cause cancer in animals. This study highlights a new and compelling reason to avoid or limit pesticide use and take necessary precautions during exposure. It also adds to a growing body of research that finds that pesticide exposure -- especially with farm life and pesticide use -- might be contributing significantly to this deadly disease.

**Shim Y, et al., Environmental Health Perspectives, Apr 07, 2009**

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#### **Medical Appèl radiation risks from doctors: Reduce exposure to electromagnetic fields.**

On April 8, 50 doctors will present a call to leaders in politics and health in the Dutch government city The Hague. Based on their own experiences, they call for measures to be taken to minimize exposure to electromagnetic fields. The signatories noted a general increase in chronic diseases with uncertain causes. This increase in health and welfare problems occurs simultaneously with the explosive increase in radiation exposure in the environment. The appeal thus is a call to reduce the exposure to these fields. Also it aims a more conscious use of electrical and wireless technology. And it encourages policy, based on any peer reviewed scientific studies published in international scientific journals, without further filtering to be applied. The signatories are all Dutch doctors, general practitioners, specialists or medical scientists. Among them is general practitioner E.P.M. Adriaansens, who will explain some cases from her medical practice. Also a patient will report his occurring symptoms in relation to exposure to specific electromagnetic fields. Symptoms that patients and scientists relate to high or low frequency electromagnetic fields (EMF) include: palpitations, concentration and memory disorders, headache, fatigue, stress and sleep disorders.

**Press Release, Dutch National Platform Radiation Risks, April 06, 2009**

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#### **Household Products Start to Come Clean on Ingredients**

You can read a label to find out what's in your food. And a quick look inside a collar or hem tells you what your clothes are made of. Now, the same is happening with the stuff you use to clean your kitchen and bathroom. A few manufacturers of household cleaning products have begun disclosing the chemicals in some of their products. S.C. Johnson & Son Inc. last month rolled out Web site WhatsInsideSCJohnson.com to describe most of the ingredients for its Windex, Glade, and Shout brands. Clorox Co. lists ingredients for its Formula 409 and other products at The CloroxCompany.com. Seventh Generation Inc., which has long disclosed most of the ingredients for its eco-friendly cleaning products, last year started explaining chemical names in terms that consumers can better understand on its labels. And Procter & Gamble Co. plans to list its ingredients online and describe them in consumer friendly terms.

**Wallstreet Journal, April 2, 2009**

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#### **Risk of birth defects linked to month of conception**

Babies conceived in the spring and summer are more likely than others to be born with a range of birth defects, according to new research. A possible reason: The levels of pesticides and other agrichemicals in surface water happen to peak at the same time. The U.S. study, published in this month's issue of the medical journal Acta Pædiatrica, relies on data from the U.S. Geological Survey, the Environmental Protection Agency and the birth

certificates of 30.1 million babies born in the United States from 1996 to 2002. Lead author Paul Winchester, a professor of clinical pediatrics at Indiana University's school of medicine, and his colleagues found a strong association between the increased number of birth defects in children of women whose last menstrual period occurred in April, May, June or July and elevated levels of nitrates, atrazine and other pesticides in surface water (streams and rivers) during the same period.

**Globe and Mail, April 01, 2009.**

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Exposure to the crop herbicide imazethapyr might promote the development of some cancers, researchers report in the *International Journal of Cancer*. Imazethapyr belongs to a group of chemicals called heterocyclic amines and "there is a wealth of evidence implicating several heterocyclic amines as (cancer causing), although not all of these compounds are equally harmful," lead researcher Dr. Stella Koutros told Reuters Health. "Several heterocyclic amine compounds are used in occupational settings, such as use of the crop herbicide imazethapyr among farmers." Koutros of the National Cancer Institute, Rockville, Maryland, and colleagues analyzed data from 1993 to 1997 on more than 20,000 pesticide workers who had used imazethapyr. Through 2004, almost 3000 incident cancers developed in this group. Workers exposed to the highest levels of imazethapyr were over twice as likely to develop bladder cancer than workers who were not exposed to the agent at all. Similarly, high exposure to imazethapyr increased the odds of colon cancer by 78 percent. By contrast, exposure to the pesticide did not seem to cause cancers of the prostate, lung, or kidney, or the skin cancer melanoma. The results suggest that imazethapyr exposure may be overlooked as a cause of bladder and colon cancer, Koutros said.

**Reuters, April 01, 2009**

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**"PBDEs in US and German clothes dryer lint: A potential source of indoor contamination and exposure."**

... unlike PCBs and PCDDs/PCDFs, the route of PBDE exposure is not almost exclusively through food. PBDE levels in US food are not markedly higher than in Europe, although US human blood and milk levels are an order of magnitude higher. ... PBDE contaminated clothes dryer lint and household dust are indicators of indoor contamination and may be sources of human exposure through hand-to-mouth contact or dermal absorption. ... Household dryer lint from 12 US and seven German homes were analyzed for PBDEs ... median US total PBDE levels were more than 10 times higher than median German levels and the mean US levels were two times higher than mean German levels. ... PBDE contamination of lint was found in all samples; the source of the PBDEs may be from dryer electrical components and/or dust deposition onto clothing.

**Schechter, et al., Chemosphere, April, 2009**

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**Pesticide sales & adult male cancer mortality**

In Brazil, where the use of pesticide grows rapidly, studies that evaluate the impact of pesticide exposure on cancer incidence and mortality are very scarce. In this study, we evaluated the degree of correlation between pesticide sales in 1985 in eleven Brazilian states and cancer mortality rates during 1996-1998... Pesticide sales showed statistically significant correlation with the mortality rates for the cancers of prostate ( $r=0.69$ ;  $p=0.019$ ), soft tissue ( $r=0.71$ ;  $p=0.015$ ), leukemia ( $r=0.68$ ;  $p=0.021$ ), lip ( $r=0.73$ ;  $p=0.010$ ), esophagus ( $r=0.61$ ;  $p=0.046$ ), and pancreas ( $r=0.63$ ;  $p=0.040$ ). Moderate to weak correlations were observed for the cancers of larynx, lung, testis, bladder, liver, stomach, brain, and NHL and multiple myeloma. In addition, correlation between pesticide sales and specific-site cancer mortality rates was reinforced by multiple regression analysis. For all specific-sites, cancer mortality rates were significantly higher in the states of moderate (2nd tertile) and high (3rd tertile) pesticide sales, with MRR ranging from 1.11 to 5.61. Exploring hidden relationships between pesticide sales and cancer mortality in Brazil, through a factor analysis, revealed that affluence; public policies and lifestyle behaviors may explain almost 70% of the variance of the studied association. The results suggest that population exposure to pesticides in the 1980s in some Brazilian States may have been associated with selected cancer sites observed a decade later.

**Chrisman, et al., International Journal of Hygiene and Environmental Health, 2009**

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**Evaluation of cleaning activities on respiratory symptoms in asthmatic female homemakers.**

**BACKGROUND:** Asthma among professional cleaners is recognized as a common cause of new-onset and aggravated occupational asthma. Women are usually the primary persons responsible for cleaning their homes, but little information is available regarding the health impact of cleaning in the nonoccupational setting. **OBJECTIVES:** To compare health effects of cleaning among asthmatic and nonasthmatic women who are the primary cleaners in their homes... Twenty-five women with asthma and 19 without asthma, ages 18 to 65 years, completed the study. No effect was observed on peak expiratory flow rates after cleaning between groups. Upper respiratory tract symptoms increased after cleaning for both groups, adjusted for chemical severity exposure index and duration of cleaning. However, the change in the number of lower respiratory tract symptoms (after cleaning minus before cleaning) was statistically significant for asthmatic patients compared with nonasthmatic patients ( $P = .01$ ). **CONCLUSIONS:** The study suggests that cleaning activities are associated with increased lower respiratory tract symptoms in asthmatic patients independent of chemical severity exposure index and cleaning duration. Women with asthma should be routinely interviewed as to whether they clean their home and cautioned about the potential respiratory health effects of these activities. **Bernstein JA, et al., Ann Allergy Asthma Immunol. January, 2009**

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