



Learning and Developmental Disabilities Initiative

[of the Collaborative on Health and the Environment](#)



Biweekly Bulletin May 4, 2011

This bulletin lists upcoming events plus recent announcements, news and journal articles, calls for proposals and other items related to learning and developmental disabilities and environmental health. They are archived and searchable on LDDI's website:

www.healthandenvironment.org/working_groups/learning/r/bulletins

LDDI Highlights

Teleconference May 10th: Who's in Charge of Environmental Health at Schools?

LDDI partner American Association on Intellectual and Developmental Disabilities Environmental Health Initiative is hosting a call with Dr. Jerome A. Paulson to discuss environmental health in schools. See event #2 below for details.

Healthy Lives, Healthy Minds, June 9th

This AAIDD Environmental Health Initiative workshop follows the successful EHI conference on the environment and the developing brain held in Minnesota December '08. Featured presentations will focus on the science that links environmental exposures and impacts on the developing brain. This workshop is part of [AAIDD Annual Meeting](#) June 5-9, 2011, in St. Paul, Minnesota.

Autism Society National Conference, July 6-9, 2011

The Autism Society welcomes all who wish to learn more about autism, network with others affected by autism, and learn the latest on autism and environmental health and public policy to their annual national conference in Orlando, Florida. Child care is available, and Disney World excursions are close by. The conference will feature the third annual science symposium on Saturday July 9th. Leading scientists and advocates will discuss autism and environmental health, the latest research on environmental influences and the developing brain, and policy needs to protect the public.

New Members

The Learning and Developmental Disabilities Initiative welcomes these new members:

- Lynne Heilbrun, MPH, San Antonio, Texas
- Antoinette Williams, Fairfield, California

Announcements

A daily news feed with articles and announcements is available on CHE's website:
<http://www.healthandenvironment.org/news/announce>.

[Call for nominations: Healthy Homes Leader Awards.](#)

You're invited to nominate colleagues, state and local leaders, agency teams and programs that have made significant contributions to making our homes, families and communities healthier and safer. Nominations will be accepted until June 2, 2011 in the five categories.

[California Environmental Health Tracking Program Web Portal.](#)

The California Department of Public Health is working to improve public health by delivering science-based information on the trends and distributions of diseases, environmental threats, and the often complex relationship between them.

[Free tools to protect health as summer smog season begins.](#)

Current air quality conditions and next day forecasts for New England are available each day at EPA's web site. People can also sign up to receive "Air Quality Alerts." These alerts, provided free by EPA through the EnviroFlash system, automatically notify participants by e-mail or text message when poor air quality is predicted in their area.

[EPA seeks small entity participation on two upcoming air rules.](#)

The US Environmental Protection Agency is inviting small businesses, governments, and not-for-profit organizations to participate as small entity representatives for two Small Business Advocacy Review (SBAR) Panels to establish standards for vehicle emissions and update emission standards for refineries.

[EHP launches Earth Day website.](#)

The site features a collection of recent EHP research, news, science education materials, and podcasts that relate to the overarching themes of air, land, water and climate.

[Internship openings: Portland, Oregon.](#)

The Josiah Hill III Clinic has two opening for unpaid interns 1) to direct community education and outreach regarding the effects of toxic chemicals on our health, as well as our advocacy of policies supportive of chemical safety and 2) to take the lead on a campaign to increase awareness of lead poisoning risks associated with home remodeling.

[Job opening: Research Triangle Park, North Carolina.](#)

The National Institute of Environmental Health Sciences of the National Institutes of Health is searching for a senior investigator qualified for tenured appointment to direct its Clinical Research Program, which includes an on-site Clinical Research Unit in Research Triangle Park and components at the Clinical Research Center in Bethesda, Maryland. The application deadline is June 13, 2011.

Upcoming Events

Online Calendar. These and more upcoming events are listed in a searchable calendar: <http://www.healthandenvironment.org/cgi-bin/searchevents.cgi>. The calendar now lists deadlines for funding proposals and conference abstracts.

1) Safe Chemicals Act of 2011

Monday May 9, 2011

1:00 - 3:00 p.m.

Sponsor: Bergeson & Campbell, PC; B&C Consortia Management, LLC; The Acta Group, LLC; and The Acta Group EU, Ltd

Bergeson & Campbell, PC (B&C), will host a webinar to discuss Senator Frank Lautenberg's (D-NJ) recently reintroduced bill to amend the Toxic Substances Control Act (TSCA), the Safe Chemicals Act of 2011. This webinar will focus on the new bill, identify and discuss key differences from S.3209, and build on B&C's September 22, 2010, webinar, which focused on TSCA reform developments to that time.

Price: free

[Visit the website](#)

2) Who's in Charge of Environmental Health at Schools?

Tuesday May 10, 2011

2:00 p.m. Eastern / 11:00 a.m. Pacific time

Sponsor: American Association on Intellectual and Developmental Disabilities
Environmental Health Initiative

Jerome A. Paulson, MD, FAAP, associate professor of Pediatrics and Public Health at George Washington University, will discuss environmental health in schools. Children spend many hours each week in and around school buildings. Their short- and long-term health outcomes and ability to learn are affected by numerous environmental factors related to the school buildings, the school grounds, the school transportation system, and the use of various products and materials in and around the school. Many school buildings are old, and they—and even newer buildings—can contain multiple environmental health hazards. While some districts self-report they have environmental health policies in place, no independent verification of these policies or their quality exists. Teachers and other adult staff are afforded some protections from hazards by Occupational Safety and Health Administration (OSHA) regulations, employment contracts or occupational health services. But children who are more vulnerable to hazards than adults are not provided these protections. Major environmental problems include indoor air quality, lighting, pests and pesticides, heavy metals and chemical management issues, renovation of occupied buildings, noise, and cleaning processes and products. No federal or state agency is charged with ensuring children's health and safety in and around school buildings. No systematic means exists for collecting data about exposures which occur in the school setting. Dr. Paulson will offer recommendations for dealing with data collection, federal actions, state and local actions, and for building the capacity of the Environmental Protection Agency and the CDC-funded Pediatric Environmental Health Specialty Units (PEHSU) in responding to and evaluating risks to children's environmental health in schools.

Price: free

[Visit the website](#)

3) Congressional Staff Briefing: Toxic Beauty: Salon Workers' Exposure to Dangerous Chemicals

Wednesday May 18, 2011

2:00 - 3:00 p.m.

Washington, DC

in HCV 200

Sponsor: National Healthy Nail Salon Alliance, Campaign for Safe Cosmetics, National Asian Pacific American Women's Forum and Women's Voices for the Earth, in cooperation with the Congressional Asian Pacific American Caucus

Speakers include Jamie Silberberger, director of Programs & Policy for Women's Voices for the Earth; Michael DiBartolomeis, PhD; Thu Quach, PhD, research scientist with Cancer Prevention Institute of California and the California Healthy Nail Salon Collaborative; Ty Nguyen, licensed cosmetologist and nail salon worker; Van Nguyen, licensed cosmetologist and nail salon owner; and Safiyyah Edley, stylist with Luvmikinks in Los Angeles.

Price: free

Contact: Randi Moore, 202-587-2861 or rmoore@rabengroup.com

4) The Potential Role of Maternal Antibodies in the Etiology of Autism: Support from a Monkey Model and the Clinical Population

Wednesday May 18, 2011

2:00 - 3:00 p.m.

Research Triangle Park, North Carolina

at the NIEHS campus, 111 T.W. Alexander Drive, Rall Building Room F193

Sponsor: National Institute of Environmental Health Sciences

The lecturer will be Loren Martin, PhD, of Azusa Pacific University.

Price: free

[Visit the website](#)

Contact: Dr. Patricia (Tricia) Jensen, patricia.jensen@nih.gov

5) 12th World Congress on Environmental Health

Saturday through Friday, May 21 - 27, 2011

Vilnius, Lithuania

at the Radisson Blu Hotel Lietuva

Sponsor: International Federation of Environmental Health and Lithuanian Union of Hygienists and Epidemiologists

The Congress will focus on the most relevant issues that reflect the main theme of the Congress - "New Technologies, Healthy Human Being and Environment" including traditional topics and aspects of environmental health, such as health impact and health risk assessment, noise and electromagnetic fields impact, food safety and public education. The Congress will touch as well new challenges to public health, such as information technologies, gene engineering, new epidemics, climate change and other. The conference language is English.

Price: unknown

[Visit the website](#)

Contact: see the [Contacts page](#)

6) Science and Decisions: How Can We Advance Risk Assessment

Tuesday May 24, 2011

10:00 a.m. Pacific / 1:00 p.m. Eastern time

Sponsor: Collaborative on Health and the Environment

Risk assessment has become a dominant public policy tool for making choices, based on limited resources, to protect public health and the environment. It has been instrumental to the mission of the US Environmental Protection Agency (EPA) as well as other federal agencies in evaluating public health concerns, informing regulatory and technological decisions, prioritizing research needs and funding, and in developing approaches for cost-benefit analysis. However, risk assessment is at a crossroads. Despite advances in the field, risk assessment faces a number of significant challenges, including lengthy delays in making complex decisions; lack of data, leading to significant uncertainty in risk assessments; and many chemicals in the marketplace that have not been evaluated and emerging agents requiring assessment. *Science and Decisions: Advancing Risk Assessment* (also known as the 'Silverbook'), published by the National Academy of Sciences in 2009, makes practical scientific and technical recommendations to address these concerns. On this call, three leading national researchers will discuss the report's recommendations and what progress has been made towards their implementation-as well as what obstacles remain in order to more accurately evaluate public health risk.

Price: free

[Visit the website](#)

Contact: CHE, info@healthandenvironment.org

7) CHE Fertility call: Finding Your Voice: Advocacy for Healthcare Professionals

Thursday May 26, 2011

10:00 a.m. Pacific / 1:00 p.m. Eastern time

Sponsor: Collaborative on Health and the Environment-Fertility & Reproductive Health Working Group

Join us for a discussion of strategies for health care professionals advocating for changes

in policy that will protect patients from environmental risks. Dr. Ted Schettler will describe the unique role that healthcare professionals play in advocacy and the best use of existing scientific evidence. Dr. Maye Thompson will present effective approaches for working with advocacy groups and professional organizations. Brenda Afzal will look at advocacy in practice, examining barriers to progress and presenting success stories of clinicians in action. Resources for pursuing opportunities for advocacy will be discussed throughout the call.

Price: free

[Visit the website](#)

Contact: CHE, info@healthandenvironment.org

8) Autism, Mercury Exposure, and Disordered Porphyrin Metabolism

Thursday May 26, 2011

12:30 - 1:20 p.m.

Seattle, Washington

at the University of Washington, HSB T-435

Sponsor: University of Washington Department of Environmental and Occupational Health Sciences

The speaker will be Jim Woods, PhD, research professor emeritus of Environmental and Occupational Health Sciences at the University of Washington.

Price: free

[Visit the website](#)

News and Journal Articles

[Exercise may protect the brain from chemical-induced injury.](#)

Tuesday, May 03, 2011

Recent research using mice suggests that exercise may also offer some protection against environmental toxicants and neurodegenerative diseases by reducing inflammation in the brain. NIEHS Environmental Factor.

[Hormones and the stress response.](#)

Tuesday, May 03, 2011

According to NIEHS distinguished lecturer Ron de Kloet, PhD, everyday stressors induce specific physiological changes in the body. NIEHS Environmental Factor.

[Endosulfan banned worldwide.](#)

Sunday, May 01, 2011

The pesticide endosulfan will be banned in 2012 except for certain exempted uses, under an agreement struck April 29 by more than 170 countries. Endosulfan can cause neurological and reproductive problems in farmworkers and wildlife and can persist in the environment. Chemical & Engineering News.

[See other articles about pesticides: [Prenatal pesticide linked to lower IQ](#); [Pesticides influence on IQ](#); [Green groups call for national ban on endosulfan](#); [Killer pesticide Endosulfan escapes govt ban](#); [Ketchum adopts no-pesticide policy](#); [Common weed killer atrazine is showing up in public water supply](#); [Punjab's killing fields](#); [Debate rages over DDT use in Uganda](#); [Expert says world endosulfan ban would be over the top](#); [Geneva meet bans endosulfan](#) and [Endosulfan poisoning](#)]

[Carrying too much weight during pregnancy could affect newborns' iron status, brain development.](#)

Saturday, April 30, 2011

Babies born to obese mothers are at risk for iron deficiency, which could affect infant brain development, according to a study to be presented Saturday, April 30, at the Pediatric Academic Societies (PAS) annual meeting in Denver. Health, Medical, and Science Updates.

EPA Administrator Jackson leads town hall on children's health.

Friday, April 29, 2011

People don't think of the Environmental Protection Agency as a public health agency, says EPA Administrator Lisa P. Jackson, but the EPA's job is to protect the health of adults and children by safeguarding air and water and promoting clean communities. Emory Health Now Blog.

[See other articles about children's health: [Pediatricians examine impact of environmental disasters on children's health](#) and [Symposium charts impact of stress on children's environmental health](#)]

Long-term poverty but not family instability affects children's cognitive development, study finds.

Friday, April 29, 2011

Children from homes that experience persistent poverty are more likely to have their cognitive development affected than children in better off homes, reveals research published ahead of print in the Journal of Epidemiology and Community Health. ScienceDaily.

[See another article about the larger environment and health: [Green environments essential for human health, research shows](#)]

ALA rates air quality of US cities; look up yours.

Thursday, April 28, 2011

Ozone and particle pollution are the most widespread air pollutants -- and among the most dangerous. Recent research has revealed new insights into how they can harm the body -- including taking the lives of infants and altering the lungs of children.

[See other articles about air quality: [Christie launches \\$2.5 million effort to reduce air pollution caused by construction equipment](#); [Georgia court rejects air permit for new coal-fired power plant](#); [Smog alert stepped up: Air pollution gets worse as the country basks in the hottest Easter weekend EVER](#); [Epigenetic changes seen in elderly men after prolonged air pollution exposure](#); [Report: Region's air among US worst](#); [Report: Nearly half of N.Y. counties fail to curb air pollution](#); [Redbridge: Pollution levels soar](#); [Report: California cities have worst air pollution in U.S. and How good is the air that you breathe?](#)]

Exide to spend \$20 million to reduce lead emissions by nearly 90 percent at Frisco battery-recycling plant.

Thursday, April 28, 2011

Exide Technologies Inc. has agreed to spend \$20 million on pollution controls and reduce lead emissions by nearly 90 percent at its battery recycling plant in Frisco. Dallas Morning News, Texas.

New plastic chemical study linked to industry.

Thursday, April 28, 2011

Four authors of a new report concluding that bisphenol A is safe have ties to companies and groups that benefit from the controversial chemical. California Watch.

[See other articles about BPA: [Daily intake of bisphenol A and potential sources of exposure: 2005-2006 National Health and Nutrition Examination Survey](#); [I-Team Investigation: Hidden toxic ingredients?: A case study of high prenatal bisphenol A exposure and infant neonatal neurobehavior](#); [More Coca-Cola shareholders want info on chemicals in the can](#) and [China announces BPA ban dates](#)]

Obama administration affirms comprehensive commitment to clean water.

Thursday, April 28, 2011

The framework emphasizes the importance of partnerships and coordination with states, local communities, stakeholders and the public to protect public health and water quality, and promote the nation's energy and economic security.

[See articles and announcements about water quality: [Utilities gird for new regs as EPA studies toxicity of hex chromium](#); [EPA seeks public comment on proposed changes to list of impaired waters for Missouri](#) and [You get what your vegetables drink](#)]

[U.N.'s Ban to convene nuclear safety summit in September.](#)

Wednesday, April 27, 2011

U.N. Secretary-General Ban Ki-moon said he plans to convene a summit to discuss nuclear safety following the crisis at Japan's Fukushima plant -- using the occasion of the 25th anniversary of the world's worst nuclear accident at the Chernobyl plant in Ukraine to call for worldwide improvements in nuclear safety. Reuters.

[See other articles about radiation hazards: [Nuclear crisis takes high psychic toll in Japan](#); [Chernobyl lessons missed because of research gaps, says radiation expert](#); [Scientists to map radioactive contamination in Fukushima](#); [Parents fight back over raised radiation limits](#); [China pays price for world's rare earths addiction](#) and [Research says SmartMeters safe, but many see need for more study](#)]

[Pediatricians seek better regulation of toxins.](#)

Monday, April 25, 2011

The U.S. needs to do a better job protecting children and pregnant women from toxic chemicals, says the American Academy of Pediatrics, the latest of a growing number of medical organizations to call for changes in the way that the government regulates dangerous chemicals. USA Today.

[See other articles about efforts to regulate chemicals: [Brown appoints SF official to state toxic panel](#); [Progress made on environment, but real change may take 20 years](#); [Study](#) and [Groups seek reform of toxic substances act](#)]

[Vaccination debate pits benefit, risk.](#)

Sunday, April 24, 2011

A Virginia whooping cough outbreak has brought a national discussion about why people refuse vaccines to the forefront of this small, rural community because the vast majority of the sick children had not been vaccinated against pertussis. Roanoke Times, Virginia.

[See another article about vaccinations: [New concerns over swine flu jab after children given it 'hit by sudden sleep syndrome'](#)]

[Cumulative risk assessment of chemical exposures in urban environments.](#)

Saturday, April 23, 2011

We conclude that measures to reduce the health impact of environmental pollution should focus on the improvement of indoor air quality and the reduction of PM(10) emissions. Environment International.

[See other articles about exposures: [Manganese exposure from drinking water and children's classroom behavior in Bangladesh](#); [PAH/aromatic DNA adducts in cord blood and behavior scores in New York City children](#) and [Communicating about chemical body burden, with Tracey Woodruff and Rachel Morello-Frosch](#)]

[Some progress made in eliminating toxic PCBs.](#)

Saturday, April 23, 2011

Mexico is carrying out a project to identify, decommission and eliminate polychlorinated biphenyls waste in order to reduce risks of human exposure and environmental damage. Inter Press Service.

[See another article about PCBs: [Passing down pollution: calculating intergenerational exposure to PCBs](#)]

[Pa. drillers told to stop sending wastewater to treatment plants.](#)

Saturday, April 23, 2011

Pennsylvania regulators are calling on Marcellus Shale natural gas drillers to stop sending wastewater to 15 treatment plants, citing an increased risk of contaminating public drinking water. While voluntary, this action sets the stage for a formal ban. Philadelphia Inquirer, Pennsylvania.

[See other articles about mining and fracking: [Scrutiny of a farm town's water divides residents](#); [Forum sees mixed views on fracking](#); [BLM hears from Coloradans on hydraulic fracturing](#) and [CSG groundwater concerns 'legitimate'](#)]

[Autism's causes: How close are we to solving the puzzle?](#)

Saturday, April 23, 2011

The rise in the number of reported autism cases has caused a surge in research to find the causes. For the latest thinking, Robert MacNeil speaks with four leading researchers about the issue. It's part three of the Autism Now series of reports. PBS NewsHour.

[See related articles: [Autism now: exploring the 'phenomenal' increase in U.S. prevalence](#); [5-minute screen identifies subtle signs of autism in 1-year olds](#) and ["Autism epidemic" challenged by UK research](#)]

[Green spring cleaning.](#)

Saturday, April 23, 2011

In addition to the human hazards of some cleaning products, there is a concern over the environmental dangers they may cause to the water and soil. WSOC Television.

[Mercury climbing in food chain, new study shows.](#)

Friday, April 22, 2011

Levels of mercury have risen dramatically in some Pacific seabirds in the past 120 years, suggesting that industrial emissions containing the poisonous metal associated with fetal and brain damage may be climbing the food chain and endangering sensitive species, according to a new study. San Francisco Chronicle.

[See other articles about mercury: [University of Georgia tests hair to find toxin levels](#); [Mercury found in Dearborn residents](#); [U of A studies mercury levels in Arctic food chain](#) and [Everglades suffering from sulfate runoff, methylmercury contamination](#)]

[Half of US states now have strict anti-smoking laws while nationwide ban is on track for 2020.](#)

Friday, April 22, 2011

In a new report, the CDC estimates that roughly 47.8 per cent of residents are now covered by comprehensive state or local indoor smoking bans. London Daily Mail.

[See other articles about tobacco: ; [Ontario clamping down on contraband cigarettes](#); [Regulator will treat e-cigarettes like tobacco](#); [Helping the mentally ill to quit smoking](#); [Cigarette packets in Australia must have pictorial health warning](#) and [Restaurant air quality improves, but debate continues a year after the smoking ban](#)]

[A clean settlement.](#)

Thursday, April 21, 2011

Spokane wastewater workers will begin searching out the sources of cancer-causing pollutants that wash into the Spokane River as part of the city's agreement with the Spokane Riverkeeper. Spokane Pacific NW Inlander, Washington.

[See other articles about contaminated sites: [EPA seeks public comment for cleaning up island in Tittabawassee River](#); [Residents rally against use of leaded fuel at SMO](#); [EPA cracks down on Pilsen smelter](#); [Unlikely polluters: 'Green energy' not always so clean](#); [DEP offers information about TCE](#) and [New lead contamination cleanup method to be tested in New Orleans](#)]

[Plastic bottles raise hormonal activity of bottled spring water.](#)

Thursday, April 21, 2011

Plastic bottles can further contaminate natural spring water with estrogen active compounds, report researchers who tested and compared water from the same sources but was bottled in either glass or plastic. Environmental Health News.

[See another article about plastic and endocrine disruptors: [Our 'toxic' love-hate relationship with plastics](#)]

[ADHD risk rises with degree of prematurity, study suggests.](#)

Thursday, April 21, 2011

Children born prematurely appear more likely to be diagnosed with ADHD. But now researchers have established that a greater risk exists even for babies born moderately early -- and that the size of the risk is associated with the level of prematurity. Los Angeles Times, California.

[See a related article: [Stress during pregnancy has effect on child's behavior: new study](#)]

[China sets limit on melamine in baby food.](#)

Thursday, April 21, 2011

Infant food products, in which the quantity of melamine is higher than one milligram per kilogram of food, will be prohibited from sale in China, according to an official regulation. Melamine is a toxic chemical used in manufacturing plastics. Beijing News, China.

[See other articles about contamination in food: [Aldi abandons colour additives](#); [China food scandals spark new safety fears](#); [China jails 14 for peddling tainted milk powder](#) and [Fish caught in 9 of 10 largest Minn. walleye lakes indicate PFC levels are zero or very low](#)]

[Grandsons may be affected by old pregnancy drug.](#)

Thursday, April 21, 2011

Four decades after doctors realized that a drug called DES -- used to prevent pregnancy complications -- had devastating consequences for babies, a new study finds those effects may be reverberating into the third generation. Reuters.

[See other articles about prenatal exposures: [Widespread use of medications among pregnant women, researchers report](#) and [Spring babies 'are more likely to suffer from anorexia'](#)]

[A comparison of PBDE serum concentrations in Mexican and Mexican-American children living in California.](#)

Thursday, April 21, 2011

Latino children living in California have much higher PBDE serum levels than their Mexican counterparts. Environmental Health Perspectives.

[A year after the spill, "unusual" rise in health problems.](#)

Thursday, April 21, 2011

A year after the BP disaster, more people are reporting medical and mental health problems to nonprofits and doctors working in coastal areas. National Geographic News.

[See a related article: [Gulf oil spill: fishermen say they are sick from cleanup](#); [ABC News investigation](#)]

#48 - 05/03/11 Nicotine - A Most Addictive Killer

Lessons Learned

Nicotine - A Most Addictive Killer

by Steven G. Gilbert, PhD, DABT

"Use of this product should be restricted to prayerful or religious activity, or social activity which reflects aspects of the Creation." (Lang, 1997)

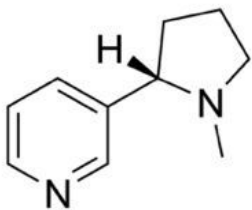
"To cease smoking is the easiest thing I ever did. I ought to know, I've done it a thousand times." Mark Twain

Nicotine was isolated from tobacco leaves (*Nicotiana tabacum*) in 1828, but the powerful effects of nicotine were already well recognized. The tobacco plant is native to the Americas, and its use as a medicine and stimulant goes back at least 2000 years and most likely many millennia before that. South American temple carvings show Mayan priests enjoying the benefits of this drug from smoking tobacco through a pipe. Tobacco appears as part of the healing arts and sacred rituals of many of the native peoples of the Americas.



Jean Nicot (1530 - May 4, 1600), a French diplomat and scholar, brought the tobacco plant to Europe, and the drug was named after him as well, as nicotine. He sent tobacco and seeds from Portugal to Paris in 1550 and promoted their medicinal use. Sir Walter Raleigh popularized pipe smoking in England. Before he was beheaded on October 28, 1618, he requested to smoke a final bowl full of tobacco.

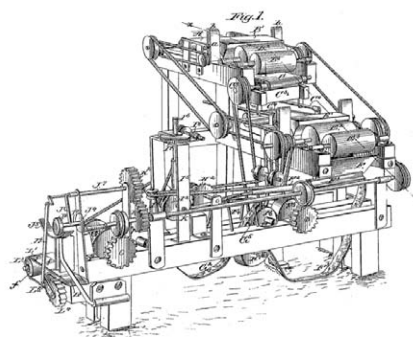
Nicotine is a potent drug with a long history of use and enormous



effects on our society. From a toxicology perspective, nicotine is a pesticide that naturally occurs in tobacco and is a powerful drug with multiple nervous system effects. The habit of tobacco use is directly related to the biological effects of nicotine. While people in the 1500s did not understand the mechanisms behind the complex physiological effects of nicotine, they certainly felt and appreciated its stimulating and relaxing properties. The desire to consume nicotine is encouraged not only by these seemingly pleasant effects, but also by the need to avoid the unpleasant effects of no longer having nicotine in your blood.

The societal effects of tobacco and nicotine started early and continue today. By the early 1600s tobacco farming had become an important cash crop for export to Europe by the new colonies in North America. Some historians believe the colonies would not have prospered without the money from this toxic crop. Tobacco is a demanding crop to grow, and as tobacco farming spread south there was a growing demand for workers. In the 1700s tobacco plantation farmers began importing African slaves to work the tobacco farms.

Cigarettes were invented in 1614 by beggars in Seville, Spain, who collected scraps of cigars and rolled the tobacco into small pieces of paper. Cigarettes are a highly effective drug delivery device, and their consumption grew gradually in popularity, although cigarettes were expensive to produce until 1880 when a machine to roll cigarettes was patented. This invention ushered in much cheaper cigarettes and major tobacco corporations. Cigarette consumption increased steadily, spurred along by both world wars and relentless marketing by the tobacco companies.



Albert Bonsack's cigarette rolling machine, invented in 1880

The health effects of tobacco are many and now well known. The undesirable health effects of tobacco consumption were not entirely unrecognized even as consumption increased. By 1890, 26 states had passed laws banning the sale of cigarettes to minors.

Green tobacco sickness (GTS) afflicts workers harvesting tobacco when nicotine is absorbed through the skin from handling wet tobacco leaves. Workers report symptoms of nausea, vomiting, weakness, dizziness, headache, and, depending on the amount of exposure, decreases in heart rate and blood pressure. These are the classic signs of nicotine poisoning.

Nicotine is one of the most potent, toxic, and readily available drugs today. Over 5.5 trillion cigarettes are produced globally each year and are smoked by over 1.1 billion people, which on average reduces their life span by 14 years.

It took decades to begin the regulation of an industry that purposefully marketed a deadly product to children. On March 21, 2000, the US Supreme Court ruled that the US Food and Drug Administration lacked the authority to regulate tobacco. On June 22, 2009, President Obama signed the Family Smoking Prevention and Tobacco Control Act, landmark legislation that gives the US Food and Drug Administration authority to regulate the manufacturing and marketing of tobacco. Secondhand tobacco smoke is now recognized as a serious hazard to both children and adults. We have an ethical responsibility to ensure our children can reach and maintain their full potential, which means a life free of tobacco smoke and products.

Nicotine at Toxipedia: <http://toxipedia.org/x/FgE>

Looking back to go forward

Lessons Learned is a bulletin feature focusing on an historical event that provides an important lesson for ensuring a more sustainable and healthy environment. Please feel

free to send suggestions to [Steve Gilbert](#).

Past Lessons Learned: <http://toxipedia.org/x/06Jb>

The Collaborative on Health and the Environment offers this information as a service but does not endorse any of the events, articles or announcements.

Companion bulletins are available for different audiences:

- For those interested in general children's environmental health: http://www.healthandenvironment.org/working_groups/childrens_health/bulletins
- For those interested in environmental health in Washington State and the Pacific Northwest: <http://washington.chenw.org/bulletins.html>

While there is overlap with this bulletin, there are some events and announcements unique to those bulletins.

If you would like to join the Collaborative on Health and the Environment (CHE) and the LDDI Working Group, please complete the application on the CHE website: <http://www.healthandenvironment.org/application> Joining CHE means receiving up to four email messages a month from the CHE National listserv. CHE costs nothing to join and the benefit is shared information and opportunities for further engagement, if you choose. Be sure to mark that you want to join the Learning and Developmental Disabilities Initiative Working Group at the bottom of the application.

Nancy Hepp
Collaborative on Health and the Environment

[Join Our Mailing List!](#)