April, 2018

CNHHE News

Happy Spring, CNHHE Members! Spring in Canada is a time when green things begin to flourish and humans gain a renewed sense of hope. With that in mind, please take advantage of the many opportunities we have to help lead our blessed country in the direction of a healthier, more sustainable future.

As most of you probably know, the Canadian Environmental Protection Act (CEPA) is undergoing revision. This is tremendously important, as the Act plays a huge role in ensuring that the products and substances to which we and our environment are exposed are the least toxic possible.

There will be a teleconference and face-to-face meeting concerning CEPA in Ottawa on April 27. The CNHHE is sending four delegates, who have been involved in the process, to attend the face-to-face meeting. Any forthcoming calls to action will be shared with you.

Chemicals Management Plan (CMP) News:

Isophorone Diisocyanate (IPDI)

- The Draft Screening Assessment for Isophorone Diisocyanate (IPDI) was published for a 60-day public comment period ending on May 2, 2018.

Seven Hydrocarbon-based Substances

- The Draft Screening Assessment for Seven Hydrocarbon-based Substances was published for a 60-day public comment period ending on May 9, 2018.

Epoxy Resins Group

- The Draft Screening Assessment for the Epoxy Resins Group was published for a 60-day public comment period ending on May 23, 2018.

Toluene diisocyanates (TDI)

- A Proposed Pollution Prevention Planning Notice in respect of TDIs was published for a 60-day public comment period ending on May 23, 2018.

A subset of Inorganic and Organometallic Substances

- A proposed Chemicals Management Plan Approach for a Subset of Inorganic and Organometallic Substances was published for a 60-day public comment period ending on June 19, 2018.

Revised In Commerce List

- A Notice of intent to announce the formal end of acceptance of substance nominations to the Revised In Commerce List was published.

Second Phase of Polymer Rapid Screening

- The Final Screening Assessment for the Second Phase of Polymer Rapid Screening was published.

Canada.ca (Chemical Substances) Website has changed

- Please be advised that the email address for the Canada.ca (Chemical Substances) Website has changed. The new email address is: HC.chemicalsubstances-chimiques.SC@canada.ca
  Please update your directory as needed.

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Other Opportunities and Information:

Canadian Partnership for Children's Health and Environment (CPCHE)

Healthy Schools Day is April 3, 2018

This Healthy Schools Day, let's protect children and staff from a known cancer risk. Let's rule out radon.

- Long-term exposure to high levels of radon causes lung cancer.
- Schools and child care environments can have high levels of radon.
- Children and staff should be protected from this preventable risk.

Radon is a naturally occurring radioactive gas that comes from rock and soil. It can enter schools, homes and other buildings and build up to harmful levels. Long-term exposure to high levels of radon is the number one cause of lung cancer in non-smokers.

Rule out radon. Sign the petition. SIGN TODAY

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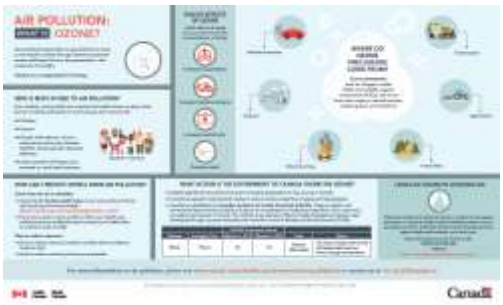
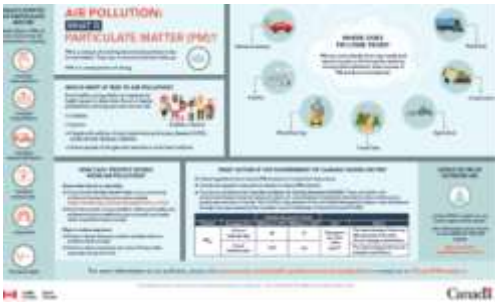
Health Canada

New infographics for ozone and particulate matter have been developed by the Air Health Effects Assessment Division of Health Canada:

Ozone:



Particulate matter:



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Tips from Health Canada on household product safety

With spring cleaning just around the corner, Health Canada would appreciate your help in spreading the word about household chemical safety and buying second-hand products. Please pass this information on to your organization's members or feel welcome to post on your website, share through social media, or on bulletin boards.

Safety tips for parents and caregivers when using household cleaning products:

- Read the label and follow the instructions every time you use a household chemical. Teach children that the hazard symbols mean *Danger! Do not touch!*
- Keep chemicals, cleaning supplies, detergent packets, medications, cosmetics, and even art materials safely stored in a locked cabinet or box, out of sight and reach of children.
- Store all household chemical products in their original containers. Keep all safety information. Make sure all child-resistant containers are working properly.

- If a poisoning is suspected, contact your local Poison Control Centre, or call 911 immediately. Keep emergency numbers by your telephone just in case.
- Check the Household chemical safety page of Canada.ca to find out more!

Buying and selling second-hand products - what you should know:

- Popular items at garage sales include toys, car seats, cribs, playpens, children's clothing and helmets, as well as household products like window blinds, and small appliances.
- In Canada, it is the seller's responsibility to make sure their products are safe, however buyers should also check to see if the products meet regulatory or safety requirements.
- To find out whether a product may be unsafe or banned, check the Buying second-hand products page of Canada.ca as well as the Recalls and safety alerts database.
- You may also report any health or safety concern involving a consumer product or cosmetic to Health Canada.
- For more information, please contact Health Canada's Consumer Product Safety Program at 1-866-662-0666 or *cps-spc@hc-sc.gc*.

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The safe use of cookware

Pots, pans and other cookware are made from a variety of materials. These materials can enter the food that we cook in them. Most of the time, this is harmless. However, care should be taken with some materials.

Most of the cookware in Canada is safe to use for daily meal preparation, as long as you maintain it well and use it as intended. However, there are some potential risks in some cookware materials.

Minimizing your risk

- Do not cook or store food for long periods of time in aluminum cookware.
- Do not use badly scratched or un-coated copper cookware to cook or store food. If you do have some older tin or nickel coated cookware, use it for decorative purposes only. Do not scour coated copper cookware.
- If you know you are allergic to nickel, do not use nickel-plated cookware.
- If you are sensitive to nickel and are having difficulty managing your allergy, discuss options with your doctor. Foods known to contain higher levels of nickel include oats and oat products, peas, beans, lentils and cocoa products, such as chocolate, particularly dark chocolate.
- Do not store foods that are highly acidic, such as stewed rhubarb or stewed tomatoes, in stainless steel containers.

- If you bring in glazed ceramic cookware from abroad, be aware that it may not meet Canadian permitted levels for lead and cadmium. Do not use it to serve or store food. Use it for decoration only.
- Don't use plastic bowls or wrap in the microwave unless they are labelled as microwave safe. (Editor's note: Safer not to use plastic in the microwave.)
- If you reuse plastic items for storage, such as dairy product containers, let the food cool before storing, then refrigerate it immediately. Avoid visibly damaged, stained or unpleasant smelling plastics and containers. Never heat or store food in plastic containers that were not intended for food.
- Do not use silicone cookware at temperatures above 220°C (428°F) as it will melt if exposed to high temperatures. You should also be careful when removing hot foods from flexible silicone cookware, as the food may slide out very quickly.

Health Canada administers and enforces the *Canada Consumer Product Safety Act* (CCPSA) and the *Glazed Ceramics and Glassware Regulations*. Health Canada monitors the marketplace and takes action on cookware found not to meet the requirements of the legislation.

Read more here!

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Greenpeace

What are microfibers and why are our clothes polluting the oceans?

Synthetic fibers could be a wonderful thing. Their production requires far less water than cotton and they don't require toxic pesticides to grow. But does that make them environmentally friendly? Sadly not.

The expansion of fast fashion wouldn't be possible without polyester. Relatively cheap and easily available, polyester is now used in about 60% of our clothes. But, if we take into account the fossil fuels used in its production, CO2 emissions for polyester clothing are nearly three times higher than for cotton! Our reliance on polyester is one of the reasons why the fashion industry is one of the most polluting industries in the world; both in terms of its emissions-heavy production and the non-biodegradable waste it leaves behind.

One piece of clothing can release 700,000 fibers in a single wash

Once our clothes reach a washing machine, the synthetic fabrics release tiny strands: so-called microfibers. These are essentially microscopic pieces of plastic, just like the microbeads you find in cosmetics.

Every time you run your washing machine, hundreds of thousands of microfibers are flushed down the drain. Many reach beaches and oceans where they can remain for hundreds of years.

Swallowed by fish and other sealife, microplastic travels up the food chain, where they end up on our plates.

30% of ocean plastic pollution could come from microplastics

According to a new IUCN report, microplastics could be causing even more of a problem than we thought. Between 15% to 31% of marine plastic pollution could be from tiny particles released by household and industrial products, rather than larger plastic items that degrade once they reach the sea.

The IUCN calculates that 35% of this microplastic pollution comes from washing synthetic textiles. Europe and Central Asia alone dump the equivalent of 54 plastic bags worth of microplastics per person per week into the oceans.

So what can we do?

It's unrealistic to think that we can get rid of synthetic fibers altogether. Their use is too widespread and the sheer volume of clothing that we produce simply can't be manufactured using only cotton and other natural fibers. And while the manufacturing industry is developing solutions; like more efficient filters for washing machines, they don't yet tackle the problem.

We need to radically rethink the way we manufacture and use what we wear. Clothes should be produced without polluting the environment. They should be designed with durability in mind, so that they can be recycled only after many years of use. As consumers we have a big part to play in preventing microfibers from polluting the oceans, simply by buying less. If we reduce consumption, we reduce waste. It starts with being more conscious of the issue, and the rest should be simple.

Less is more

Rethinking our buying patterns is possible. We already shop too much and wear our clothes too little. A 2015 survey by Greenpeace Germany revealed that about 40% of our clothes are rarely or never worn [in German]. We can change that. We can buy secondhand or vintage, make use of clothing exchanges online and within local communities, or up-cycle our existing clothes. Clothing doesn't have to be brand-new to be fashionable.

Visit Story of Stuff to find out more about microfibers and what you can do to help, and please share the video and spread the word!

Dr. Kirsten Brodde is the Detox my Fashion Global Project Lead at Greenpeace Germany.

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Natural Sciences and Engineering Research Council of Canada

Improving treatment of mining wastewater

Improvements have been made in the treatment of mining wastewater contaminated with cyanides and their by-products, thanks to a research project by a partnership including the Institut de recherche en mines et environnement UQAT-Polytechnique (IRME), the Centre technologique des résidus industriels (CTRI) at the Cégep de l'Abitibi-Témiscamingue, Agnico Eagle Mines Ltd. and Mabarex Inc. A final report was recently issued on the problems that this project encountered in the treatment of effluent at Agnico Eagle's LaRonde mine.

According to Pierre-Olivier Gendron, a water-treatment specialist at Agnico Eagle, the results of this research project are of great importance to the mining industry. He says, "The tests that we performed in this project validated the approach that we wanted to apply to implement a denitrification circuit at our biological wastewater treatment plant. The results of this research validated various treatment costs while fostering information exchanges among the participants. These investments will position the LaRonde division as a leader in the biological treatment of mining wastewater in Quebec."

The first step in the project consisted in an in-depth characterization of the LaRonde mine effluent at various stages in the treatment process. Next, researchers Carmen M. Neculita (IRME UQAT-Polytechnique) and Thomas Genty and Robin Potvin (CEGEPAT-CTRI) tested the effluent pre-treatment methods used at the mine, in order to propose possible solutions for the treatment of contaminants. Mabarex Inc., which specializes in water treatment processes, contributed to the analysis of the feasibility of the proposed solutions and of the costs associated with their application.

The researchers stress the importance of transferring knowledge and exchanging expertise. "By bringing researchers from colleges and universities together with specialists from industry and a water-treatment consultant, this project enabled us to take our research out of the laboratory and apply it at the mine site." The students trained in the course of this project can now continue to transfer expertise within the mining industry. In all, one postdoctoral fellow, one master's student, three students doing specialized graduate studies, and 10 college and university interns contributed to this project.

This project ran from 2013 to 2017 and received financial support from the two partner companies, as well as from NSERC, through its College and Community Innovation Program – College-University Idea to Innovation Grants.

This article was adapted with the permission of the Université du Québec en Abitibi-Témiscamingue.

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Équiterre

Why do our governments authorize dangerous pesticides?

When I was a child, doctors used to smoke in hospitals—in front of patients! And my friends used to smoke in lectures at university! Tobacco companies have known for a long time that cigarettes are bad for our health, but they funded studies saying the opposite and discredited independent studies that suggested tobacco was a concern. And our governments trusted their bogus studies.

Today, few doctors or researchers will tell you that tobacco is harmless.

CALL FOR INDEPENDENT SCIENCE AND FUNDING

When it comes to pesticides, recent reports by Radio-Canada and Le Devoir show that we still have a lot of work to do.

Some researchers say that pesticides developed specifically to kill insects, weeds and fungi pose no risk to human health or non-target species, including useful insects like bees, birds and frogs. Those researchers are generally supported by pesticide manufacturers and distributors.

The federal agency that approves pesticides in Canada recently admitted to a journalist that it primarily uses industry studies to determine product safety and efficacy.

Recent investigations by journalists Thomas Gerbet for Radio-Canada and Sarah Champagne for Le Devoir show that the public funding granted to some independent researchers of the Centre de recherche sur les grains, a grain research centre, is controlled by industry and powerful farming lobby groups.

In a recent open letter, researchers made a heartfelt plea for research funding in this field to be increased and to be granted to industry-independent research centres.

As Quebec has just restricted the sale of five of the most dangerous pesticides and Ottawa is considering stricter regulations for the use of neonicotinoids, or bee-killing pesticides, this would be a good time to rethink research funding in this area.

Industry-funded research should not be our only source of information, and agronomic advice given to farmers should be independent, too. In the last few days, journalists have once again revealed that this is not the case. The government should make sure it is, either by funding independent agronomists, as suggested by the Union des producteurs agricoles [farmers' union], or by hiring its own agronomists, as suggested by the Syndicat de la fonction publique [public service union].

Pesticides are a serious threat to the health of pregnant women, children, farmers and their families—and all Canadians. I'm willing to bet that in 20 years, we'll realize that they're as big a threat as tobacco.

And yet there are alternatives to using most pesticides, which are often less expensive than synthetic pesticides and still protect farmers' yields!

Governments started acting to reduce smoking when they stopped believing biased industry studies.

When will our governments act to eliminate pesticides?

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East Coast Environmental Law

Support the Nova Scotia Environmental Bill of Rights

On April 21st, 2017, on the eve of Earth Day, citizens packed into the Wooden Monkey in Halifax, Nova Scotia for the public release of a proposed non-partisan Environmental Bill of Rights for Nova Scotia. The Bill, developed by the *Nova Scotia Environmental Rights Working Group* (NSERWG), endeavours to give everyone in the province legal access to a healthy environment. Similar laws exist in other provinces, but this is the first time a proposed EBR recognizes the unique concerns of traditionally marginalized or vulnerable residents.

Nova Scotians are often left in the lurch when it comes to industrial pollution and other environmental degradation impacting their communities. Without a legal right to a healthy environment, community members find their concerns falling on deaf ears. This is where *you* come in.

HOW YOU CAN HELP:

We are asking citizens from across Nova Scotia to demand the right to a healthy environment be enshrined in and protected by law. Visit the website to find all the resources you need to send an email to your local MLA candidate, as well as the party leaders for the Liberals, PC's and NDP's. You can simply copy the information into your email client, or you can even download and print the document to be sent by post, the choice is yours.

We thank you for supporting environmental rights in Nova Scotia. Isn't it about time?

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Environmental Health Perspectives

Neonatal Genistein Exposure and Glucocorticoid Signaling in the Adult Mouse Uterus

Shannon D. Whirledge,[1] Edwina P. Kisanga,[1] Robert H. Oakley,[2] and John A. Cidlowski[2]

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BACKGROUND: Female reproductive tract development is sensitive to the endocrine-disrupting potential of environmental estrogens. Early-life exposure to the dietary phytoestrogen genistein impairs fertility and persistently alters the transcriptome in the oviduct and uterus of rodents. Glucocorticoid signaling, which has recently been shown to be essential for normal fertility in the female mouse uterus, is antagonized by genistein.

OBJECTIVE: Our goal was to determine whether early-life exposure to genistein disrupts glucocorticoid signaling in the mouse uterus, which may contribute to infertility.

METHODS: Female C57Bl/6 mice were exposed to either 50 mg/kg per day genistein, 10 μg/kg per day estradiol, or vehicle (corn oil) on postnatal days 1–5 (PND1–5), and then treated with the synthetic glucocorticoid dexamethasone (Dex: 1 mg/kg) or vehicle (saline) on PND5, at weaning on PND21, or as adults on PND56 following adrenalectomy and ovariectomy to evaluate glucocorticoid responsiveness. Uteri were isolated following treatment for gene expression or chromatin immunoprecipitation.

RESULTS: Neonatal exposure to genistein altered the uterine transcriptome of adult mice and caused substantial changes to the transcriptional response to glucocorticoids. Although expression of the glucocorticoid receptor was not affected, genistein exposure disrupted glucocorticoid receptor recruitment to specific regulatory sites in target genes. Many genes involved in chromatin remodeling were dysregulated in genistein-exposed mice, suggesting that epigenetic reprograming may contribute to the altered glucocorticoid response of the uterus following early-life exposure to genistein. These changes affected the biological activity of glucocorticoids within the uterus, as glucocorticoids antagonized the proliferative effects of estradiol in the uterus of control mice but not genistein-exposed mice.

CONCLUSIONS: Our findings suggest that disruption of glucocorticoid signaling due to early-life exposure to environmental estrogens may in part render the uterus unable to support implantation. https://doi.org/10.1289/EHP1575

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Air Pollution and Glucose Metabolism: An Analysis in Non-Diabetic Participants of the Heinz Nixdorf Recall Study

Sarah A. Lucht,[1] Frauke Hennig,[1] Clara Matthiessen,[1] Simone Ohlwein,[1] Andrea Icks,[2,3] Susanne Moebus,[4] Karl-Heinz Jöckel,[4] Hermann Jakobs,[5] and Barbara Hoffmann[1]

[1]Environmental Epidemiology Group, Institute of Occupational, Social and Environmental Medicine, Medical Faculty, Heinrich-Heine University Düsseldorf, Düsseldorf, Germany. [2]Institute for Health Services Research and Health Economics, Centre for Health and Society, Medical Faculty, Heinrich-Heine University Düsseldorf, Düsseldorf, Germany. [3]Institute for Health Services Research and Health Economics, German Diabetes Center (DDZ), Düsseldorf, Germany. [4]Institute of Medical Informatics, University Hospital Essen, University of Duisburg-Essen, Biometry and Epidemiology (IMIBE), Essen, Germany. [5]Rhenish Institute for Environmental Research (RIU), University of Cologne, Cologne, Germany

BACKGROUND: Despite the importance of understanding the connection between air pollution exposure and diabetes, studies investigating links between air pollution and glucose metabolism in nondiabetic adults are limited.

OBJECTIVE: We aimed to estimate the association of medium-term air pollution exposures with blood glucose and glycated hemoglobin A1c (HbA1c) among nondiabetics.

METHODS: This study included observations from nondiabetic participants (n_{obs}=7,108) of the population-based Heinz Nixdorf Recall study at baseline (2000–2003) and follow-up examination (2006–2008). Daily fine particulate matter (aerodynamic diameter≤2.5 μm, $PM_{2.5}$; aerodynamic diameter≤10 μm, PM_{10}), accumulation mode particle number (PN_{AM}), and nitrogen dioxide (NO_2) exposures were estimated at participants' residences using the spatiotemporal European Air Pollution Dispersion (EURAD) chemistry transport model. We evaluated the associations between medium-term air pollution exposures (28- and 91-d means) and glucose metabolism measures using mixed linear regression and adjusting for season, meteorology, and personal characteristics. A range of other exposure windows (1-, 2-, 3-, 7-, 14-, 45-, 60-, 75-, 105-, 120-, and 182-d means) were also evaluated to identify potentially relevant biological windows.

RESULTS: We observed positive associations between $PM_{2.5}$ and PN_{AM} exposures and blood glucose levels [e.g., 28-d $PM_{2.5}$: 0.91 mg/dL (95% CI: 0.38, 1.44) per 5.7 μg/m^3]. $PM_{2.5}$, PM_{10}, and PN_{AM} exposures were positively associated with HbA1c [e.g., 91-d $PM_{2.5}$: 0.07 p.p. (95% CI: 0.04, 0.10) per 4.0 μg/m^3]. Mean exposures during longer exposure windows (75- to 105-d) were most strongly associated with HbA1c, whereas 7- to 45-d exposures were most strongly associated with blood glucose. NO_2exposure was not associated with blood glucose or with HbA1c.

CONCLUSIONS: Medium-term PM and PN_{AM} exposures were positively associated with glucose measures in nondiabetic adults. These findings indicate that reducing ambient air pollution levels may decrease the risk of diabetes. https://doi.org/10.1289/EHP2561

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A Case–Control Study of Maternal Polybrominated Diphenyl Ether (PBDE) Exposure and Cryptorchidism in Canadian Populations

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BACKGROUND: Polybrominated diphenyl ethers (PBDEs) are flame retardants found in North American household products during the past four decades. These chemicals leach out in dust as products age, exposing individuals daily through inhalation and ingestion. Animal studies suggest that PBDEs disrupt sex hormones and adversely affect development of the reproductive system.

OBJECTIVES: In the present study, we examined whether there is a link between maternal hair PBDE concentrations and the risk of cryptorchidism (undescended testes) in male infants; testis descent is known to be dependent on androgens.

METHODS: Full-term male infants were recruited through clinics in Montreal, Toronto, and London, Canada. Boys with cryptorchidism at 3–18 months of age (*n*=137) were identified by pediatric urologists and surgeons; similar-aged controls (*n*=158) had no genitourinary abnormalities as assessed by pediatricians. Eight BDE congeners (BDE-28, -47, -99, -100, -153, -154, -183, -209) were measured by GC-MS (gas chromatography–mass spectrometry) in maternal hair samples collected at the time of recruitment.

RESULTS: The ∑PBDE geometric mean for maternal hair was 45.35 pg/mg for controls and 50.27 pg/mg for cases; the concentrations of three BDEs (BDE-99, -100, and -154) were significantly higher in cases than controls in unadjusted models. In adjusted models, every 10-fold increase in the concentration of maternal hair BDE-99 [OR=2.53 (95% CI: 1.29, 4.95)] or BDE-100 [OR=2.45 (95% CI: 1.31, 4.56)] was associated with more than a doubling in the risk of cryptorchidism. BDE-154 [OR=1.88 (95% CI: 1.08, 3.28)] was also significant.

CONCLUSIONS: Our results suggest that maternal exposure to BDE-99, -100, and -154 may be associated with abnormal migration of testes in the male fetus. This may be due to the anti-androgenic properties of the PBDEs. https://ehp.niehs.nih.gov/ehp522/

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The Environmental Health Association of Quebec

Tips for a healthy home - Is indoor air quality a concern for you? It is estimated that we spend 90% of our time indoors. According to the Environmental Protection Agency, indoor air can be 10 times as polluted as outdoor air. Recent research shows connections between long-term low-level exposures to chemicals and a variety of health risks. Some people are more sensitive to commonly encountered chemicals and continued exposure can lead to disability. These include people who suffer from environmental sensitivities.

Continue reading

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Environmental Sensitivities Awareness Day - Online Bilingual Conference, May 12 2018.

For over 30 years patients have been seeking help from primary care physicians for new and emerging medical conditions. In the early years, sceptics challenged the physiological validity of the symptoms but over time, a large body of scientific evidence has grown that supports that these conditions are biological. Education and awareness of the research has not been sufficiently disseminated to medical professionals and politicians. For Environmental Sensitivities Awareness Day, we have gathered a group of experts to help

make us more aware of the medical, social and legal issues of Environmental Sensitivities.

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CoPEH - Canada

Course on Ecosystem Approaches to Health

Registration for the May 2018 CoPEH-Canada course and webinar series on ecosystem approaches to health is now open to all graduate students and professionals in Canada and elsewhere interested in the topic.

This part online, part face-to-face graduate level course on ecosystem approaches to health is being offered at three sites in May 2018: Montréal (UQAM), Southern Ontario (University of Guelph), and Prince George (University of Northern British Columbia). Eight 90-minute sessions will be conducted as simultaneous webinars across the three sites and the rest of the time will be locally run sessions, including field trips. We offer a rigorous, hands-on pedagogical approach, illustrated through a case study.

This course is available to graduate students from all disciplines and also to professionals interested in these themes. It is possible to register for the full course for credit at one of the participating universities or to follow the webinars only, on-line (a certificate of completion is provided).

The 90-min webinars (8) will run from 1 to 2:30 (EST)/10 to 11:30 (PST) on Tuesdays and Thursdays from May 1st to May 24th. The course will run on these same days and include the webinars, plus field visits, lectures and activities. The webinar topics TENTATIVELY* include the following:

Orientation to Hybrid Course/Webinar Series: Introduction, History of Principles of Ecohealth, & Negotiating Health Activity (2hrs)
Transdisciplinarity & Knowledges
Resilience & Sustainability
Sex, Gender, & Equity
Resourse Extraction
Complexity & Systems Thinking
Gender & Knowledge Translation
Universities in their Watersheds, Social Networks Activity & Closing (2hrs)

*This is list is provided here to give an idea of the type of content covered in the 8 webinars and may change.

The Canadian Network for Human Health and the Environment (CNHHE) is concerned with broad human health-related environmental issues relating to air, water, soil, food, climate- change and consumer products.

Membership is open to non-governmental, research, and healthcare professionals, government policy-makers and individuals who are interested in the connections between human health and environmental exposures.

A primary focus of the network is to educate about and engage members in the Chemicals Management Program (CMP) of Health Canada and Environment and Climate Change Canada

CONTACT US:

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For those interested in taking the 2018 course or following the webinar series and to register, please contact us at copeh-can@uqam.ca.

For more information visit our course webpage.

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