

In this issue...

Next events:

- 13th HCH & Pesticides Forum - 3-6 November, Zaragoza (Spain).
- City Health Conference 2015 - 5-6 November, Barcelona (Spain).

News:

- News on Environmentally Pharmaceutical Persistent Pollutants - EPPP.
- Excellence in research.
- World Health Organization should not engage with the asbestos industry.
- Chemical exposure linked to billions in health care costs.
- The dangers of dental amalgams: risks of illness, anxiety, and more.
- "Nuclear accident: how sheltering is safe?" by G. Ghirga.
- "Clean air in Europe: beyond the horizon?" by B. Brunekreef, N. Künzli, J. Pekkanen, I. Annesi-Maesano, B. Forsberg, T. Sigsgaard, M. Keuken, F. Forastiere, M. Barry, X. Querol and R.M. Harrison.
- Nordic Countries estimate high costs from chemical exposure.
- "Climate change. Challenges and opportunities for global health" by J.A. Patz and D.J. Vimont.
- "Towards a systemic paradigm in carcinogenesis: linking epigenetics and genetics" by E. Burgio e L. Migliore.
- Canada's ugly secret.
- More nuclear power is not the answer to the climate crisis.
- New website for COHEIRS - Civic Observers for Health and Environment: Initiative for Responsibility and Sustainability.
- ECHA consumer rights video 'alarmist', says industry association.
- The Minamata Convention on mercury.
- Organisation of economic cooperation and development: reducing children's exposure to chemicals.
- Release of the proceedings of the 7th World Congress on Environmental Education.
- Long term health effects of the last war of Israel on next generation of Gaza people.
- Nagasaki Peace Declaration 2014.
- "Why children absorb more microwave radiation than adults: the consequences" by V. Gennaro.
- "Obesity and diabetes: from genetics to epigenetics" by E. Burgio, A. Lopomo, L. Migliore.

NEXT EVENTS

13th HCH & PESTICIDES FORUM

Almost 20 years later, the international meeting of experts on issues related to obsolete pesticides meets again in Spain. In its 13th edition, the International HCH and Pesticides Forum will address the issue of lindane and the consequences of mismanagement have had on the Spanish territory. This Forum is undertaken under the framework of the LIFE+ Environment Programme, in which the European Commission has awarded the project "Lab to field, soil remediation demonstrative project: new ISCO application to environmental Multicomponent DNAPL problem" (DISCOVERED LIFE) under implementation in Sabiñánigo, Spain. From the 3rd to the 6th of November 2015, Zaragoza will be the meeting place for hundreds of researchers, experts, environmentalists and representatives from countries affected by mismanagement of pesticides and POPs, among others groups, who will give evidence of progress in research to reduce and eliminate pollution, caused by the lindane production and the related HCH wastes being dumped everywhere and more precisely in the Bailin bedrock near the

Pyrenees. A critical reflection on the past and present situation of consequences of pesticides production and management in Spain will allow the evaluation of different solutions to specific problems and build bridges between the wide range of actors and affected countries. The purpose of this meeting will facilitate the exchange of related problems arising from the manufacture of pesticides and promote international cooperation in finding solutions experiences and enable transfer of practical solutions. The deadline for registration is 15th October 2015.

Info: www.hchforum.com

CITY HEALTH CONFERENCE 2015

City Health 2015, the 4th edition of the conference, is taking place at CosmoCaixa, in Barcelona (Spain), on 5th-6th November 2015. This year's theme focuses on the key role that cities can play in developing and implementing initiatives to address global problems related to health and well-being. In previous editions of this conference issues of equity, equality and inclusion have been examined. Building on that experience this year the conference will focus on how cities, as well as being generators of problems, are also often best placed to address and solve them. The conference programme will be developed to include presentations that place issues in context and will include presentations from around the world describing practical examples of policy initiatives, programmes and projects that have been implemented to tackle specific issues and the needs of different populations and groups. As ever the conference will have a significant 'local flavour' reflecting the long-standing commitment of Barcelona to promoting health and well-being to its many populations. As one of Europe's most established ports, the city has many historical links with the rest of the world and a rich cultural mix. Like many places it is experiencing the problems that have emerged on the back of economic recession, but strives to maintain the essential services and interventions, in keeping with its 'health in all policies' approach to government. The programme will be developed by an international committee and updates will be regularly posted on this site.

Info: <http://cityhealthinternational.org/2015>; chi@kachange.eu

NEWS

NEWS ON ENVIRONMENTALLY PHARMACEUTICAL PERSISTENT POLLUTANTS - EPPP

During the last December, representatives of countries all over the world attending the Open Ended Working Group of SAICM - Strategic Approach for the International Management of Chemicals (international program focused on chemical safety under the Secretariat of UNEP and WHO) approved the incorporation of the Environmentally Pharmaceutical Persistent Pollutants - EPPP in the agenda of the 4th International Conference on Chemical Management - ICCM 4 to take place on 17th-22th October in 2015 (place to be still defined). This is an important step, in the process - strongly promoted by ISDE as well - in order to introduce and recognise EPPP as a new and emerging policy issue under the SAICM global plan of action.

Info: www.saicm.org/index.php?option=com_content&view=article&id=507:comments-received-on-the-nomination-of-eppp-as-an-emerging-policy-issues-for-consideration-by-oewg2&catid=92:oewg; www.saicm.org/images/saicm_documents/OEWG2/CommentsEPPP/Att%20%20IWW%20Chairs%20Conclusions%20EPPP%20July%202014_rev.pdf

EXCELLENCE IN RESEARCH

Awarded to Dr. Mahmood A. Khwaja, FCSP, Senior Adviser, Chemicals, Hazardous Wastes/Sites and Sustainable Industrial Development, Sustainable Development Policy Institute (SDPI), Islamabad, Pakistan by World Alliance for Mercury Free Dentistry, Washington, USA and Asian Center for Environmental Health, Dhaka, Bangladesh, during South - South East Asian NGOs summit, 14th November 2014, Dhaka (Bangladesh). Dr. Khwaja research, supported by his team, at dental sites proved the dangers of mercury amalgam use to the health care employees of dental clinics.

Info: m.a.khwaja@gmail.com

WORLD HEALTH ORGANIZATION SHOULD NOT ENGAGE WITH THE ASBESTOS INDUSTRY

Reference: RightOnCanada.ca, 16th March 2015.

The World Health Organization (WHO) is reviewing its policy on entities with which the WHO will not engage. At a 15th December 2014 Executive Board meeting on Boundaries: entities with which WHO will not engage, the WHO confirmed its policy not to engage with the tobacco and arms industries. From 30th March to 1st April 2015, member States will discuss the proposed Framework of Engagement with Non-State Actors at a WHO intergovernmental meeting. They will decide what proposals should be submitted to the World Health Assembly, which will take a final decision at its May 2015 meeting. In a letter sent on 9th March 2015, Dr. Philip J. Landrigan and his co-signers request that the asbestos industry be put on the list of entities with which the WHO will not engage, along with the tobacco and the arms industries. They point out that all the reasons for refusing to engage with the tobacco industry apply to the asbestos industry. They state: "The evidence is clear that it is inappropriate, counter-productive and harmful for the WHO to engage with the asbestos industry or individuals or organizations representing the interests of the asbestos industry."

Info: www.rightoncanada.ca/?p=2891

CHEMICAL EXPOSURE LINKED TO BILLIONS IN HEALTH CARE COSTS

Reference: National Geographic.

Exposure to hormone-disrupting chemicals is likely leading to an increased risk of serious health problems costing at least \$175 billion (U.S.) per year in Europe alone, according to a study published. Chemicals that can mimic or block estrogen or other hormones are commonly found in thousands of products around the world, including plastics, pesticides, furniture, and cosmetics. The new research estimated health care costs in Europe, where policymakers are debating whether to enact the world's first regulations targeting endocrine disruptors. The European Union's controversial strategy, if approved, would have a profound effect on industries and consumer products worldwide. The researchers detailed the costs related to three types of conditions: neurological effects, such as attention deficit disorders; obesity and diabetes; and male reproductive disorders, including infertility. The biggest estimated costs, by far, were associated with chemicals' reported effects on children's developing brains. Numerous studies have linked widely used pesticides and flame retardants to neurological disorders and altered thyroid hormones, which are essential for proper prenatal brain development. The researchers concluded that there is a greater than 99 percent chance that endocrine-disrupting chemicals are contributing to the diseases, according to the studies published in the Journal of Clinical Endocrinology and Metabolism.

Info: <http://news.nationalgeographic.com/news/2015/03/150305-chemicals-endocrine-disruptors-diabetes-toxic-environment-ngfood/>

THE DANGERS OF DENTAL AMALGAMS: RISKS OF ILLNESS, ANXIETY, AND MORE

Reference: Mercury Free Baby.

We don't often think of a cavity filling as being dangerous. Sure, receiving these fillings can be unpleasant and uncomfortable, but we generally don't have any worries about their potential negative side effects. However, recent research conducted by Dr. Mark Geier reveals that these fillings (amalgams) pose a number of health risks. Specifically, the elemental mercury in these amalgams has been shown to lead to depression, anxiety, and fatigue, all of which are commonly associated with Chronic Fatigue Syndrome and Fibromyalgia, among other chronic illnesses. The mercury in a dental amalgam is therefore not confined to the amalgam itself; its vapors do reach other areas of the body, and over time, form concentrations in these locations. However, because the release of mercury vapors in dental amalgams occurs gradually, individuals are more likely to experience chronic toxicity. Low-level exposure to mercury has also been shown to significantly alter an individual's mood, resulting in a wide range of somewhat extreme behaviors, including outbursts of anger and excessive shyness. The levels

of mercury exposure we previously believed to pose no health risks can in fact be harmful, leading to both chronic illness and psychosomatic conditions with dangerous consequences.

Info: www.ncbi.nlm.nih.gov/pubmed/25617876

NUCLEAR ACCIDENT: HOW SHELTERING IS SAFE? by G. Ghirga.

Reference: J. Marine Sci. Res. Dev. 2013, 3:3.

After a major nuclear accident the first priority is to limit the exposure to radiation by evacuation or by sheltering the affected population. Depending on the strength of the explosion or release and the prevailing meteorological conditions (e.g. wind and precipitation), a radius of between 30 and several hundreds of kilometers from the explosion epicenter should be declared a priority area for action. Sheltering may be considered a preliminary solution before evacuation. A prediction about the possibility of penetration of the radioactive gases and fine particulate matter inside a closed shelter can be made by referring to published studies on the penetration of gases and particulate matter from outdoor to indoor. Several studies have shown that outdoor particles and gas can infiltrate through the building envelope. Therefore, after a major nuclear accident sheltering offers a limited protection against radioactive gas and particulate. Furthermore, because cracks and old windows in deteriorated buildings are the most important factors determining particle/gas penetration, poor people are particularly at risk of radiation because they live in old building. High quality, standardized, evidence based information on how to respond to nuclear accident is lacking and more information on immediate, short, and long term effects of radiation, and interventions and strategies is needed to alleviate the effects.

Info: ghirgagiovanni@gmail.com

CLEAN AIR IN EUROPE: BEYOND THE HORIZON? by B. Brunekreef, N. Künzli, J. Pekkanen, I. Annesi-Maesano, B. Forsberg, T. Sigsgaard, M. Keuken, F. Forastiere, M. Barry, X. Querol and R.M. Harrison.

Reference: Eur. Respir. J. 2015; 45: 7-10.

Weak policies are proposed for the short to medium term, accompanied by nonbinding promises of truly clean air at some suitably distant point in the future, promises which then are not kept when that distant future becomes uncomfortably close to the messy present. Do we need to worry still about air pollution in Europe? The answer, unfortunately, is yes.... The 2013 National Emission Ceilings Directive proposal and Recommendations.

Info: <http://erj.ersjournals.com/content/45/1/7>

NORDIC COUNTRIES ESTIMATE HIGH COSTS FROM CHEMICAL EXPOSURE

Reference: HEAL Press release, November 2014.

A body representing Denmark, Finland, Iceland, Norway and Sweden has suggested that up to 40% of the health costs associated with several serious male reproductive problems may be due to exposure to hormone disrupting chemicals (also known as endocrine disrupting chemicals EDCs). "The Cost of Inaction: Socioeconomic analysis of costs linked to effects of endocrine disrupting substances on male reproductive health" is published by Norden - The Nordic Council of Ministers. The authors chose to focus on negative effects on male reproductive health (genital defects in baby boys known as cryptorchidism and hypospadias; poor semen quality; and cancer of the testes known as testicular germ cell cancer) because "the causal link between exposure to endocrine disruptors and negative effects is relatively well established". After a series of delays in implementing regulation on endocrine disrupting chemicals (EDCs), the EU Commission's health directorate (DG SANCO) has opened a public consultation on the criteria to identify endocrine disrupting chemicals in the EU biocides and pesticides legislation. The move is widely understood to offer industry an opportunity to provide information about the costs of the associated potential market bans for their endocrine-disrupting pesticides and biocides. The consultation is being conducted through an online questionnaire.

Info: www.env-health.org/resources/press-releases/article/nordic-countries-estimate-high

CLIMATE CHANGE. CHALLENGES AND OPPORTUNITIES FOR GLOBAL HEALTH by J.A. Patz and D.J. Vimont.

Reference: JAMA. 2014;312(15):1565-1580.

Health is inextricably linked to climate change. It is important for clinicians to understand this relationship in order to discuss associated health risks with their patients and to inform public policy. The study want to provide new US-based temperature projections from downscaled climate modeling and to review recent studies on health risks related to climate change and the co-benefits of efforts to mitigate greenhouse gas emissions. Evidence over the past 20 years indicates that climate change can be associated with adverse health outcomes. Health care professionals have an important role in understanding and communicating the related potential health concerns and the co-benefits from policies to reduce greenhouse gas emissions.

Info: <http://jama.jamanetwork.com/article.aspx?articleid=1909928>

TOWARDS A SYSTEMIC PARADIGM IN CARCINOGENESIS: LINKING EPIGENETICS AND GENETICS by E. Burgio e L. Migliore.

Reference: Mol. Biol. Rep., November 2014.

For at least 30 years cancer has been defined as a genetic disease and explained by the so-called somatic mutation theory (SMT), which has dominated the carcinogenesis field. Criticism of the SMT has recently greatly increased, although still not enough to force all SMT supporters to recognize its limits. Various researchers point out that cancer appears to be a complex process concerning a whole tissue; and that genomic mutations, although variably deleterious and unpredictably important in determining the establishment of the neoplastic phenotype, are not the primary origin for a malignant neoplasia. We attempt to describe the inadequacies of the SMT and demonstrate that epigenetics is a more logical cause of carcinogenesis. Many previous models of carcinogenesis fall into two classes: (i) in which some biological changes inside cells alone lead to malignancy; and (ii) requiring changes in stroma/extracellular matrix. We try to make clear that in the (ii) model genomic instability is induced by persistent signals coming from the microenvironment, provoking epigenetic and genetic modifications in tissue stem cells that can lead to cancer. In this perspective, stochastic mutations of DNA are a critical by-product rather than the primary cause of cancer. Indirect support for such model of carcinogenesis comes from the in vitro and vivo experiments showing apparent 'reversion' of cancer phenotypes obtained via physiological factors of cellular differentiation (cytokines and other signaling molecules) or drugs, even if the key mutations are not 'reversed'.

Info: erburgio@libero.it, lucia.migliore@med.unipi.it;

<http://link.springer.com/article/10.1007%2Fs11033-014-3804-3>

"CANADA'S UGLY SECRET"

.....
Canada was the big exporter of asbestos to India until a couple of years ago, when we succeeded in stopping it. The Canadian asbestos industry and the government pointed to the Memorandum of Agreement, signed by the two Canadian asbestos exporters and the Government of Canada, which stated that the asbestos companies would only export asbestos to companies in India following strict safety requirements. The CBC went to India to document how Canada's asbestos was handled in India and filmed workers handling chrysotile asbestos with their bare hands and bathed in a snowstorm of asbestos fibres. The strict safety protections consisted of little cotton bandanas that the workers had tied around their faces to try and protect themselves.

Info: www.youtube.com/watch?v=UnDobTds6t0

MORE NUCLEAR POWER IS NOT THE ANSWER TO THE CLIMATE CRISIS

"We believe that expanding the role of nuclear power may threaten the planet as surely as the global warming you seek to mitigate. Fukushima alone demonstrates the risks of nuclear meltdowns even in a society based on science and advanced technology. The one hundreds plants in our country are terrorist

targets. There are no solutions in sight to nuclear waste disposal. The timelines for bringing new nuclear plants online exceed the UN's call for rapid decarbonization. The estimated costs are staggering. We urge you to revise the recommendations of the UN's Sustainable Development Solutions Network to remove its advocacy of nuclear fission as a "solution" to the climate crisis. The accelerated development of nuclear power plants would only increase the course we are on to planetary catastrophe. We urge you to develop an analytic model that includes the decommissioning of current nuclear plants as part of a transition to a future based on conservation, efficiency and renewable energy."

Info: <http://tomhayden.com/home/democracy-project-petition-letter-to-dr-jefferey-sachs.html>

NEW WEBSITE FOR COHEIRS - CIVIC OBSERVERS FOR HEALTH AND ENVIRONMENT: INITIATIVE FOR RESPONSIBILITY AND SUSTAINABILITY.

You're invited to visit the new website of COHEIRS. COHEIRS aims at supporting active participation of citizens in the EU democratic life and more specifically in the implementation of the precautionary principles, as detailed in Article 191 of the Treaty on the Functioning of the European Union (EU), through the establishment of citizens panels focused on health and environment. These groups of "civic observers", duly supported and guided, will monitor the condition of the environment by paying special attention to those violations and misconducts directly or collaterally threatening the public health. At the same time, they will be progressively inscribed and involved in an international network, which will support their efforts, advocate on their behalf at the EU level and coordinate the drafting of recommendations to be addressed to the relevant local, national and European decision makers.

Info: <https://sites.google.com/site/coheirsalda/>

ECHA CONSUMER RIGHTS VIDEO 'ALARMIST', SAYS INDUSTRY ASSOCIATION.

References: <http://chemicalwatch.com/20439/echa-consumer-rights-video-alarmist-says-industry-association#.U9afcQLSpDg.facebook>

The European Chemicals Agency - ECHA - recently released a video promotional on consumer rights. The video is part of its efforts to raise awareness among the general public about the benefits of REACH (Registration, Evaluation, Authorization and Restriction of Chemicals), as well as the consumer's right to know about hazardous chemicals contained in products they purchase. The footage shows a man scanning the aisles of a supermarket. At the checkout he is presented with a long receipt, which contains names of substances in the products he has purchased. Since its release, the UK's Chemical Business Association (CBA) association has labeled the video 'unbalanced, misleading and alarmist' and has submitted a letter of protest to ECHA's executive director Geert Dancet. However, ECHA says the video was produced to highlight the consumer's right to ask about chemicals in the products they buy, and to drive them to the information provided in the Chemicals in our life section of the agency's website. According to ECHA, the video has been viewed almost 2,500 times in its first three days online, and, since the video was uploaded, traffic to the section has seen an almost 2,000% increase in direct visitors. It says the complaint that the video is "unbalanced, misleading and alarmist" is unjustified. "We have chosen our words carefully at the end of the video: 'Every product is made of chemicals', 'Make sure you don't pay the price for any dangerous ones', 'You have the right to ask if the products you buy contain dangerous chemicals', 'Inform yourself'". ECHA says these statements reflect the spirit of article 33 of REACH which provides consumers with their right to ask.

Info: www.youtube.com/user/EUchemicals

THE MINAMATA CONVENTION ON MERCURY

The Minamata Convention on Mercury is a global treaty to protect human health and the environment from the adverse effects of mercury. It was agreed at the fifth session of the Intergovernmental Negotiating Committee in Geneva, Switzerland at 7 a.m. on the morning of Saturday, 19 January 2013. The major highlights of the Minamata Convention on Mercury include a ban on new mercury mines, the phase-out of existing ones, control measures on air emissions, and the international regulation of the informal sector for artisanal and small-scale gold mining. The Convention draws attention to a global and

ubiquitous metal that, while naturally occurring, has broad uses in everyday objects and is released to the atmosphere, soil and water from a variety of sources. Controlling the anthropogenic releases of mercury throughout its lifecycle has been a key factor in shaping the obligations under the convention. The certified true copy of the Minamata Convention text or Booklet of the Convention can be downloaded in different languages, please follow the link below.

Info: www.mercuryconvention.org/Convention/tabid/3426/Default.aspx

ORGANISATION OF ECONOMIC COOPERATION AND DEVELOPMENT: REDUCING CHILDREN'S EXPOSURE TO CHEMICALS

On 12th September 2014 the Organisation of Economic Cooperation and Development (OECD) published a report on an OECD expert workshop on children's exposure to chemicals, which took place on 7th-8th October 7-8, 2013 in Utrecht (the Netherlands). The report includes a draft decision tree to support risk assessors in deciding when to perform children-specific exposure and risk assessments. Recommendations for further work on specific exposure assessment issues are included in the document. The report points to a need for emission scenario documents for specific exposure pathways for children, for general guidance on addressing children's behavior in estimating the exposure to chemicals, and for the development of children-specific factors or parameters to be used for estimating exposure assessment. The workshop was carried out as part of an effort by the OECD to plan future activities in the area of children's environmental health. Children have been shown to be particularly vulnerable to environmental hazards, including chemical exposures.

Read here: "[Report on OECD workshop on children's exposure to chemicals.](#)"

RELEASE OF THE PROCEEDINGS OF THE 7TH WORLD CONGRESS ON ENVIRONMENTAL EDUCATION

The proceedings of the 7th World Congress on Environmental Education (WEEC, Marrakech, 9th-14th June 2013) are published and available on web-site.

Info: www.environmental-education.org/index.php?lang=en

LONG TERM HEALTH EFFECTS OF THE LAST WAR OF ISRAEL ON NEXT GENERATION OF GAZA PEOPLE

References: BMJ 2014; 349; 2014.

The letter of Dr. Izzeldin Abuelaish on 13 points to the issue of collateral damage of Israeli attacks on Gaza, in the past and today. The comment of Paola Manduca on other, usually unaccounted for, "collateral" damages of war, the "in utero" victims of war.

Info: www.bmj.com/content/349/bmj.g5106/rr/763475

NAGASAKI PEACE DECLARATION 2014

"At this precise moment, 69 years ago, the sky over this hill was covered with a pitch black nuclear cloud. The single atomic bomb, dropped by a United States bomber, blew away houses and engulfed the city in flames. Many fled for their lives through streets littered with charred bodies. 74,000 precious lives were lost to the terrible blast, heat rays and radiation. A further 75,000 people were wounded. Those who narrowly survived were inflicted with deep mental and physical wounds that will never heal, even though 69 years have now passed. Today, there are more than 16,000 nuclear warheads in existence. The hibakusha, atomic bomb survivors, who personally know the horror of nuclear weapons, have continued to desperately warn us that they must never be used again. The hibakusha and their appeal have prevented the repeated use of nuclear weapons since the bombings of Hiroshima and Nagasaki. What would happen to the world if nuclear weapons were to be used in war today? In February, the "Second Conference on the Humanitarian Impact of Nuclear Weapons" was held in Mexico. There, representatives of 146 states examined the impact of nuclear weapons from various perspectives, such as the human body, the economy, the environment, and the climate. Their findings revealed just how inhumane these weapons are, and they made terrifying predictions regarding the

consequences of a nuclear war. Not only would it be impossible to save the injured, but the advent of a "nuclear winter" would cause food supplies to run out. This means that more than 2 billion people around the world would starve. [...]"

Info: www.city.nagasaki.lg.jp/peace/english/appeal/index.html

WHY CHILDREN ABSORB MORE MICROWAVE RADIATION THAN ADULTS: THE CONSEQUENCES by V. Gennaro.

Computer simulation using MRI scans of children is the only possible way to determine the microwave radiation (MWR) absorbed in specific tissues in children. Children absorb more MWR than adults because their brain tissues are more absorbent, their skulls are thinner and their relative size is smaller. MWR from wireless devices has been declared a possible human carcinogen. Children are at greater risk than adults when exposed to any carcinogen. Because the average latency time between first exposure and diagnosis of a tumor can be decades, tumors induced in children may not be diagnosed until well into adulthood. The fetus is particularly vulnerable to MWR. MWR exposure can result in degeneration of the protective myelin sheath that surrounds brain neurons. MWR-emitting toys are being sold for use by young infants and toddlers. Digital dementia has been reported in school age children. A case study has shown when cellphones are placed in teenage girls' bras multiple primary breast cancer develop beneath where the phones are placed. MWR exposure limits have remained unchanged for 19 years. All manufacturers of smartphones have warnings which describe the minimum distance at which phone must be kept away from users in order to not exceed the present legal limits for exposure to MWR. The exposure limit for laptop computers and tablets is set when devices are tested 20 cm away from the body. Belgium, France, India and other technologically sophisticated governments are passing laws and/or issuing warnings about children's use of wireless devices [...].

More: www.sciencedirect.com/science/article/pii/S2213879X14000583

OBESITY AND DIABETES: FROM GENETICS TO EPIGENETICS by E. Burgio, A. Lopomo, L. Migliore.

Obesity is becoming an epidemic health problem. During the last years not only genetic but also, and primarily, environmental factors have been supposed to contribute to the susceptibility to weight gain or to develop complications such as type 2 diabetes. In spite of the intense efforts to identify genetic predisposing variants, progress has been slow and success limited, and the common obesity susceptibility variants identified only explains a small part of the individual variation in risk. Moreover, there is evidence that the current epidemic of obesity and diabetes is environment-driven. Recent studies indicate that normal metabolic regulation during adulthood besides requiring a good balance between energy intake and energy expenditure, can be also affected by pre- and post-natal environments. In fact, maternal nutritional constraint during pregnancy can alter the metabolic phenotype of the offspring by means of epigenetic regulation of specific genes, and this can be passed to the next generations. Studies focused on epigenetic marks in obesity found altered methylation and/or histone acetylation levels in genes involved in specific but also in more general metabolic processes. Recent researches point out the continuous increase of "obesogens", in the environment and food chains, above all endocrine disruptors, chemicals that interfere with many homeostatic mechanisms. Taken into account the already existing data on the effects of obesogens, and the multiple potential targets with which they might interfere daily, it seems likely that the exposure to obesogens can have an important role in the obesity and diabetes pandemic".

Info: www.ncbi.nlm.nih.gov/pubmed/25253098

This newsletter is ISDE Italy's Official Press Organ edited by Roberto Romizi e Silvia Caruso.

If you want to receive this newsletter, unsubscribe or send any suggestion, please contact: isde@ats.it

International Society of Doctors for the Environment - ISDE Italy

Via della Fioraia, 17/19 - 52100 Arezzo (Italy)

*Tel. +39 0575 22256, Fax +39 057528676, E-mail: isde@ats.it, Web www.isde.it
International Society of Doctors for the Environment www.isde.org*