EXPOSURE IS HAPPENING – WE NEED TO ACT NOW!


Credit: AlexshalamovDreamstime

POLITICIANS NEED TO PROTECT THE HEALTH OF THE EU CITIZENS!

They need to ensure that:

- existing EU laws are fully implemented in order to eliminate the exposure to hormone disrupters whenever possible;
- new chemical laws deal with the potential for combined and low dose effects of hormone disrupters;
- the most worrying chemicals are identified more quickly and swift action is taken, e.g. under the REACH legislation. This will also require giving more resources to the regulatory agencies in the Member States to enable them to do the job with the urgency it deserves.

AS CONSUMERS, WE CAN TAKE STEPS TO REDUCE OUR EXPOSURE TO HORMONE DISRUPTERS!

- Eat less meat and dairy and more fruits and vegetables (animal fats can be particularly contaminated with some hormone disrupters);
- Eat food produced without pesticides (certified organic) when possible;
- Avoid unnecessary exposure to or use of chemicals, particularly garden and indoor pesticides;
- Minimise the use of personal care and cosmetic products, especially during and before pregnancy. Look at labels to avoid certain chemicals linked to hormone disruption and select soaps, shampoos, cosmetics and cleaning agents from certified environmentally friendly brands using biodegradable ingredients;
- Keep rooms well aired and vacuum clean and dust regularly to remove chemicals that can be found indoors, including in dust.

More information on lists of hormone disrupters can be found here:

http://ec.europa.eu/environment/endocrine

WE ALL CAN BE ACTIVE CONSUMERS!

- Write to national/local government to urge for stricter controls of hormone disrupters www.chemicalshealthmonitor.org/spip.php?rubrique122;
- Use the new public 'Right to Know' under the EU chemicals law REACH and request information on hazardous chemicals in products (see explanatory brochure and sample letter here: www.chemicalshealthmonitor.org/spip.php?rubrique111);
- Ask your local authority or school what pesticides they spray in public places, parks and school grounds (see sample letter here: http://www.pesticidescancer.eu/spip.php?rubrique2);
- Request that schools use environmentally friendly cleaners and renovation material for decoration works.

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CHEM Trust (Chemicals, Health and Environment Monitoring Trust)
askchemtrust@chemtrust.org.uk
www.chemtrust.org

HEAL (Health and Environment Alliance)
info@env-health.org
www.chemicalshealthmonitor.org

WWF European Policy Office
wwf-epo@wwfepo.org
www.panda.org/eu

This leaflet can be downloaded from the CHEM Trust, HEAL and WWF websites above.

[1] CHEM Trust report, written by Prof R. Sharpe, on EDCs and male reproductive health disorders, 2009 http://www.chemtrust.org.uk/documents/ProfRSHARPE-MaleReproductiveHealth-CHEMTrust09.pdf
[2] CHEM Trust and HEAL report, written by Prof A. Kortenkamp, on breast cancer and exposure to hormonally active chemicals, 2008 http://www.chemtrust.org.uk/documents/BCexposuretochemicals.pdf
[3] http://www.ourstolenfuture.org/Consensus/2005-0620praguedeclaration.htm
[4] http://www.endo-society.org/journals/ScientificStatements/upload/EDC_Scientific_Statement.pdf
[5] CHEM Trust report, written by G. Lyons, on effects of pollutants on male vertebrate wildlife, 2008 http://www.chemtrust.org.uk/documents/Male%20Wildlife%20Under%20Threat%202008%20full%20report.pdf
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[8] http://ec.europa.eu/environment/chemicals/pdf/report_Mixture%20toxicity.pdf
[9] US National Academy of Sciences Report, Phthalates and Cumulative Risk Assessment, 2008
[10] http://ec.europa.eu/environment/endocrine/documents/comm1999_en.htm
[11] Registration, Evaluation, Authorisation and Restriction of Chemicals

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CHEMICAL COCKTAILS

HARMFUL MIXTURES UPSET OUR HORMONES

HOW EU POLICY SHOULD PROTECT OUR HEALTH AND THE ENVIRONMENT

EVERYDAY PRODUCTS – KEEP AN EYE OUT FOR HARMFUL CHEMICALS!


Credit: Daniela Andreea Spyropoulos/iStock
Credit: XAQC/iStock
Credit: WWF-UK
Credit: John Daniels/WWF-UK

Did you know that body lotion, tinned food or the MP3 player you use contain a variety of chemicals that may be harmful and might cause irreversible damage to your health or to wildlife?

Manufactured chemicals are an important part of modern life and are used in many every-day products from plastics and paints to electrical appliances, cosmetics and toys. They undoubtedly bring many lifestyle benefits, but many of them were not adequately tested and assessed for safety when they were first marketed. Now, the toxicity studies of some of them are raising a lot of concern.

Man-made chemicals and pesticides can be released directly into the environment from factories, via farming and from consumer products. Cars, furniture, electronic devices, cooking utensils, clothes, shoes, and many others may all contain chemicals that end up in you and some of them can disrupt your body's hormone system.

You may have heard about the safety debates on the plastic bisphenol A (BPA) used to make baby bottles, or the plasticisers (phthalates) in PVC-plastic products such as flooring. Mounting evidence suggests that hormone disrupters are causing widespread effects in adults and children – and contribute to declining sperm counts and developmental problems. The unborn and newborn child appear to be the most vulnerable. Exposure to hormone disrupters can start during a baby's development in-utero, causing effects which may not show until much later in life, but which are irreversible.

WHAT ARE HORMONE DISRUPTERS ?

Hormone disrupters are chemicals which interfere with the natural hormones in our bodies, our body's chemical messengers.

As our hormones are released by the endocrine glands, these chemicals are sometimes also called endocrine disrupting chemicals or EDCs. This means they interfere with how our bodies function, causing problems with reproduction, behaviour, brain function and the immune system. Some research suggests that they can do this even if we are exposed to extremely small amounts (the so-called 'low dose' effect).

EDCs can be:

- preservatives such as certain parabens in e.g. cosmetics and household cleaners;
- plastic softeners such as some phthalates in e.g. flooring and shoes;
- bisphenol-A used to make polycarbonate plastic for e.g. babies' bottles and DVDs, and used in food cans and in thermal paper;
- octylphenol/octylphenol ethoxylates used in the manufacture of tyres, printing inks, paints and textile processing;
- organotin compounds used as stabilizers in PVC plastics for e.g. sandals and toys.


Credit: Joshua Hodge Photography/iStock

HEALTH IMPACTS LINKED TO HORMONE DISRUPTERS

CHEMICALS DISRUPTING MALE REPRODUCTIVE HEALTH: A LIFELONG THREAT TO BOYS, MEN AND FUTURE GENERATIONS

It now appears that in several EU countries around 1 in 5 young men have impaired fertility[1]. Men's exposure to 'gender bender' hormone disrupters has been linked to this problem. Studies of male animals have also shown that chemicals to which we may be exposed, which block the male hormone (testosterone), may cause birth defects of the penis and testicles, and low sperm counts. It is therefore likely that these chemicals play a role in the birth defects of baby boys, declining sperm counts in young men and testicular cancer.


Credit: Otnaydur/Dreamstime

A RISK OF BREAST CANCER IN WOMEN

Around 1 in 10 women in Europe now gets breast cancer, a higher rate than twenty years ago.[2] The increase is not just due to higher life expectancy, later childbirth, inherited genetic risk or more screening for breast cancer.

There is good reason to suspect that hormone disrupters that mimic estrogen play a role in the increase, because it is well known that a woman's lifetime exposure to estrogen influences her risk of breast cancer. Research suggests that we will not be able to reduce the rates of breast cancer without addressing people's exposure to hormone disrupting chemicals.


Credit: Claireshearer/Dreamstime

FEMINISING WILDLIFE

Wildlife, too, is suffering from exposure to hormone disrupters, and a CHEM Trust report reviews many of the effects seen in male wildlife, which indicate that they are being biologically 'feminised'.[5] Reduced reproduction has been reported in some populations of many different species in polluted areas all over the world.

EFFECTS IN WILDLIFE LINKED TO HORMONE DISRUPTERS


Credit: Jo Benn / WWF-Canon

Many male fish in EU estuaries and in the North Sea are abnormally producing the female egg yolk protein;


Credit: Wild Wonders of Europe / Tom Schandy / WWF

Frogs and toads in some parts of the world have eggs in their testicles;


Credit: Daniela Andreea Spyropoulos/iStock

Male peregrine falcons in e.g. Spain have been feminised and also produce the female egg yolk protein;


Credit: DSanchez&Lope / WWF-Canon

Otters have been reported with undescended testicles and in Europe have suffered reduced reproduction;


Credit: Jon Aars / Norwegian Polar Institute / WWF-Canon

Male polar bears also seem to have been affected by hormone disrupters as some have been found with smaller genitalia.


Credit: Boraacar/Dreamstime

Disrupted Brain Development, Birth Defects, Diabetes, Obesity, Infertility, Breast/Testicular Cancer.

INTERNATIONAL SCIENTISTS RING THE ALARM

In addition to declining male sperm counts and increasing rates of breast cancer, research is now highlighting that chemicals are likely to play a role in very early puberty of children, endometriosis in women, disrupted brain development, cardiovascular disease, obesity and diabetes.

In 2005, because of the magnitude of the potential health risks from hormone disrupters, hundreds of international scientists signed the "Prague Declaration"[3] and said precautionary action was needed to reduce our exposure and protect our health. Similarly, the International Endocrine Society, in their 2009 scientific statement,[4] also noted the need for informed precautionary decisions about the risks from potential endocrine disruptors:

"The evidence for adverse reproductive outcomes (infertility, cancers, malformations) from exposure to endocrine disrupting chemicals is strong, and there is mounting evidence for effects on other endocrine systems, including thyroid, neuroendocrine, obesity and metabolism, and insulin and glucose homeostasis."

EU POLICIES TO DEAL WITH HORMONE DISRUPTING CHEMICALS

Over ten years ago, the European Union started to respond to the concerns about hormone disrupters, and in 1999, it set out the 'European Community Strategy for Endocrine Disrupters' to encourage research and identify appropriate policy actions.[10] Since then, new EU laws which try to deal with hormone disrupters, such as REACH[11], have been put in place, but they have not yet been effectively implemented. REACH also needs to be improved in order to give citizens the guarantee that hormone disrupters will be better controlled and replaced with safer alternatives wherever available.

The newly revised EU legislation on pesticides states that pesticides with 'hormone disrupting properties which may cause adverse effects' will no longer be approved for use, unless exposures are negligible. But it does not clearly state which pesticides are hormone disrupting, and has assigned the EU Commission to define draft criteria for this by December 2013. So before then there will be much debate on which pesticides should be banned.

THE "COCKTAIL EFFECT"


Credit: WWF-UK

Credit: WWF-UK

Credit: John Daniels/WWF-UK

Credit: John Daniels/WWF-UK

Credit: Grafissimo/iStock

Every day we are exposed to a mixture of man-made chemicals, via the air we breathe, the food we eat and the water we drink. And even when the exposure to individual chemicals is below the level where they cause an effect by themselves, new science is now showing that together they can 'add up' and cause a potentially dangerous "cocktail effect".

A recent survey from Denmark has raised concerns that 2-year-old children may be at risk from daily combined exposure to hormone disrupters commonly found in food and the indoor environment. The survey looked at several substances, such as phthalates, parabens and bisphenol A.[6] Similarly, a German Environment Agency study found bisphenol A in 591 out of 599 children between 3 and 14 years old and several phthalate metabolites in nearly all children.[7]

Contaminants that mimic estrogen (the female hormone), or block testosterone (the male hormone) or those that de-rail the thyroid hormone, which is responsible for orchestrating brain development, have all been found to act together.[8]

The cocktail effect means that the current process by which governments decide on safe levels, i.e. via a 'risk assessment', where single chemicals are considered separately, ignores the reality that people and wildlife are constantly exposed to many chemicals simultaneously. This process significantly underestimates the risk to our health from the real-life cocktail exposure. Scientists are therefore now urging public authorities to assess the combined risks of chemicals together.[9]

SUBSTITUTION IS POSSIBLE


Credit: Yupiramos/Dreamstime

Many companies have already successfully replaced known or suspected hormone disrupting chemicals with safer alternatives or are using different manufacturing processes. Baby bottles that do not contain bisphenol A are now widely available, as are cosmetics which do not use certain parabens. Sometimes the solution is using different designs or materials, such as less flammable materials which then do not require the addition of hormone disrupting flame retardants. Companies wanting to produce healthy and environmentally friendly products should avoid the use of hormone disrupters wherever possible. Some EDCs are listed on the 'Substitute It Now' (S.I.N.) List 1.1. See www.sinlist.org