The European Unions does not dare to take the battle against hazardous chemicals

Published in Svenska Dagbladet 2016-11-12 http://www.svd.se/eu-vagar-inte-ta-strid-motfarliga-kemikalier

Can chemicals in our children's rooms, living rooms and in their preschool, affect our health? This is a question that flourishes in media right now. Another current issue concerns how the EU will regulate the use of hormone disturbing substances.

It is scientifically confirmed that we are exposed every day to many chemicals, even small children and foetuses are exposed. But are they dangerous to us? Yes, we know that some of these substances may harm our health. And for others chemicals there are data that make us worry.

But although knowledge is not always complete, we state that it is motivated to take measures to limit exposure, especially to protect vulnerable groups of people. The risks especially concern chemicals that are disturbs our hormones, are cancer-causing, harmful to the genome, have effects on reproduction and substances that causes allergies.

Our concerns about the use of hormone-destructive chemicals are shared by expert organizations in the EU, the United Nations and the World Health Organization (WHO), and several compilations of major scientific data on health effects of hormone-destructive substances have recently been published. As researchers, we have contributed to these reports. Based on this knowledge, we consider that the Swedish work towards the environmental quality objective, "A Non-Toxic Environment" is in forefront and necessary.

But why are manufacturers and governments having a hard time to protect us from the use of hazardous chemicals? One reason is that it is very difficult to prove that chemicals are safe.

The purpose of the chemical legislation is to identify hazardous chemicals before humans are exposed. Unfortunately, the legislation has failed and instead we are forced to work reactively - that is, when you already know that people are exposed. For several chemicals, there is an almost total scientific agreement that their use causes such high health risks that measures to limit the use are directly motivated. But in many other cases, the image is not as clear. The clear majority of chemicals in our environment are still insufficiently tested to make a robust risk assessment. The legal requirements for testing are in many cases rudimentary and important tests are still missing. Standard tests for screening for hormone-disturbing effects are for example not required on a regular basis.

Even for chemicals that have been used for a long time and whose risks we can investigate in the population there are scientific challenges. Since we all, daily, are exposed to complex chemical mixtures, there are no unexposed groups of people to use to compare with in epidemiological studies. In other words, when chemicals in our everyday lives make us sick, there is no healthy group to compare with.

Furthermore, risk assessment of chemicals today is exclusively made one-and-one. But we know that chemicals appear combined, this is especially well-known for pharmaceuticals. Combination effects cannot be detected when testing individual chemicals. In addition, the magnitude of exposure is underestimated when we only take one chemical at a time into account.

Another challenge is that the effect of a chemical, or mixture, may show years after being exposed to it. Exposure during fetal life can, for example, give cancer and reduced fertility later in life. This makes the effects very difficult to connect to the exposure, and to which subjects.

All these factors often make it very difficult for risk assessment agencies to safely assess exactly how big the risks of chemicals are. This uncertainty is fully utilized by the chemical manufacturing industry, which systematically questions results from studies showing harmful effects. This is what they do in order to prevent and delay risk reduction decisions that may affect the market value of the chemicals they manufacture.

So, where are the hazardous chemicals? For some consumer products, table of contents is required. It concerns drugs, pesticides, cosmetics, detergents and skin care products. For the vast majority of the equipment in our homes (such as furniture, clothes, electronics, toys) and for building materials, there are no declarations about which chemicals they contain. There is thus no possibility, as a consumer, or researcher, for that matter - to know which chemicals these goods and materials contains. However, with chemical analyzes, we see that plasticizers in PVC plastics (such as phthalates), fluorinated chemicals in firefighting and textiles, chlorinated paraffin in household appliances and flame retardants are common, even though some of them are prohibited. Comprehensive research clearly shows that goods and products emit these chemicals to indoor air and dust. Some substances also reach us via drinking water, food and food products.

Therefore, it is not surprising that hundreds of studies show that hazardous chemicals can be measured in blood, urine, fetal water and breast milk. This means that fetuses, infants, children and adults are exposed to these substances all the time, throughout their lives.

We therefore believe that national and international work must be prioritized to reduce exposure to the particularly hazardous chemicals. The EU has a central role, but unfortunately, the current European Commission prioritizes the protection of the economic value of chemicals, beyond the protection of human health. Recently, the cost of the negative health effects of hormone-destructive chemicals in the EU was estimated to 163 billion euros per year. And at that time not all chemicals were covered and far from all the effects. Non-action can thus be very costly.

In summary, as a researcher in the field, we are worried about the health risks with several hazardous chemicals that we are exposed to daily. Our concern is supported by extensive research! Hundreds of wildlife studies, laboratory studies, epidemiological studies and medical observations are the basis of our concern. We do not yet know everything, but in many cases, we know enough to act to protect future generations. The EU must act from outside. Furthermore, we must see national measures at regional and local level. To state in today's state of knowledge that exposure to chemicals in our immediate environment can not cause health effects is both ignorant and irresponsible.

We believe that the health and environmental risks associated with chemicals must be treated with the same dignity as the climate issue.

Thomas Backhaus - Professor in Environmental Sciences, University of Gothenburg. Director of FRAM Centre for Future Chemical Risk Assessment and Management Strategies

Åke Bergman - Professor in Environmental Chemistry, Stockholm University, Head of the Swedish Academic Research Center for Chemicals, Health and Environment (Swetox)

Carl-Gustaf Bornehag – Professor in Public Health, Karlstad University and Icahn School of Medicine at Mount Sinai, New York, USA

Aleksander Giwercman - Professor in Reproductive Medicine, Andrologist, Lund University

Christina Rudén - Professor in Regulatory Ecotoxicology and Toxicology, Stockholm University

Olle Söder - Professor in Child and Youth Medicine, Child Endocrinologist, Karolinska Institutet

R Thomas Zoeller - Professor in Biology, University of Massachusetts Amherst and Guest Professor at Swetox