

Endocrine disrupting chemicals (EDCs) on the SIN List

EDCS ARE CHEMICALS OF HIGH CONCERN

With this SIN List update, additional endocrine disrupting chemicals (EDCs) have been added to the SIN List as new knowledge has become available and to highlight the urgent need to phase-out these EDCs from processes and products.

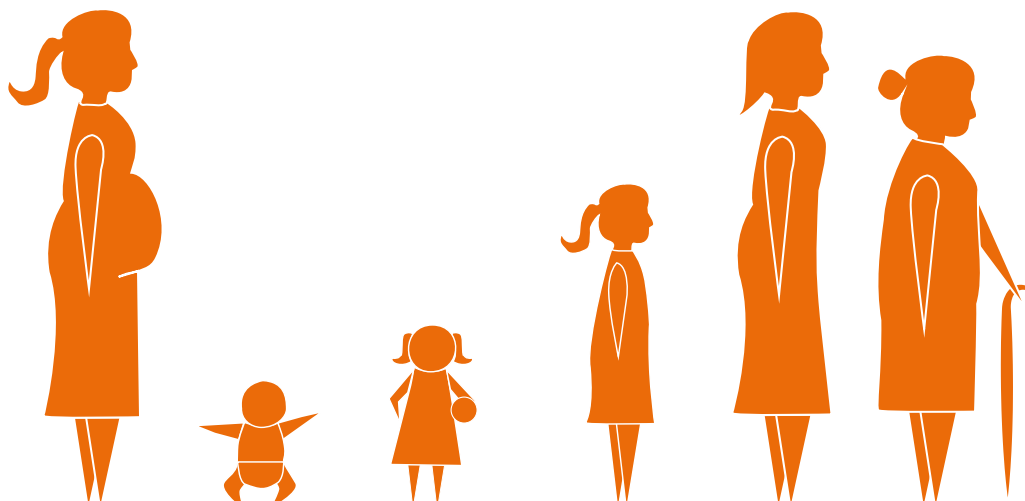
Endocrine disrupting chemicals interfere with hormonal signaling in the body. The hormone systems controls important processes such as reproduction, growth and development. If these systems are disturbed it can lead to severe problems including infertility, diabetes, obesity, cancer and learning disabilities.

What effect an endocrine disrupter will have on an individual depends very much on the timing of exposure. This means that even very low doses can have serious effects, especially during times of growth and development, as for foetuses and children. What makes it even more complex is that the effects can also be delayed, also for decades. Exposure during childhood may result in impaired reproduction as adult. Endocrine disrupting chemicals are present in many every-day products such as soft plastics, electronics, textiles and cosmetic products.

EDCS IN REGULATION

The problem of endocrine disrupting chemicals was first described more than twenty years ago by professor Theo Colborn in the book "Our stolen future". Since then the scientific knowledge about these chemicals has advanced considerably. Over the last decade, provisions on EDCs have been incorporated in EU laws. In REACH, the EU chemicals regulation, endocrine disrupters can be identified as being Substances of Very High Concern (SVHCs) under the category "equivalent level of concern" substances. In the EU pesticide and biocide

regulations substances having endocrine disrupting properties that may cause adverse effects will not be approved for the respective use (unless listed exemptions are fulfilled). However the criteria to define endocrine disrupting properties are not yet in place. Most likely, once the criteria have been established for the pesticide and biocide regulation, these will also be used for other EU regulations. In the absence of criteria, EDCs for the REACH candidate list are identified on a case-by-case basis.



EDCS ON FORMER VERSIONS OF THE SIN LIST

For the first version of the SIN List, launched in 2008, a number of substances with endocrine disruptive properties were included as “equivalent level of concern” substances. The SIN List update in 2011 was focused entirely on EDCs since there was a strong need to highlight the EDC issue and show practical ways forward. The scientific team of Dr. Theo Colborn evaluated available data on a number of EDC substances and then used a case-by-case approach to identify the high concern chemicals. At the time, no EDCs had yet been included on the REACH candidate list. Following the launch of the update, the Environmental Commissioner Janez Potočnik addressed the SIN EDCs in a

speech, saying that the update “should indicate to you the substances the European Commission will take into consideration for placement on the candidate list”. In December the same year, the first substance (octylphenol) proposed by Germany was included on the candidate list due to its EDC properties.

In 2012 the Danish EPA made an evaluation of the 22 new SIN EDCs and four additional substances against Denmark’s suggested EDC criteria. This evaluation verified 21 of the 22 substances as being EDCs. The substance excluded had mainly neuroendocrine effects, which was not part of the Danish criteria.

THE NEW SIN LIST EDCS

In the three and a half years since the EDC-focused SIN update much has happened, although not as much as we hoped. Several new reports, including reports for the European Commission, the UN and the WHO have highlighted the urgency to act on these chemicals. Also, new data has become

available for many substances. Once again we have had leading scientists to evaluate endocrine disrupting properties of a number of substances. For a full description of the process, please consult the SIN List methodology document.

Examples of endocrine disrupting chemicals on the SIN List

Phthalates

Phthalates is a group of chemicals often used as plastic softeners but also e.g. as fragrance carriers. They can be found in products such as electronics, textile prints, flooring, toys and cosmetics. Many phthalates have shown anti-androgenic and estrogenic properties and some have been classified as being toxic to reproduction.

Bisphenols

Bisphenol A (BPA) is the most well known of the bisphenols. It is one of the worlds most widely manufactured and spread substance. BPA is estrogenic, and proposed to be classified as toxic to reproduction in the EU. BPA is used in everything from polycarbonate plastics to cash receipts and food contact materials. Following the increased awareness of the hazardous properties of BPA the use of other bisphenols has increased. However also BPS and BPF have estrogenic properties and have therefore now been added to the SIN List.

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