

Excerpts from

COMMUNITY HYGIENE CONCERN TRUSTEES' ANNUAL REPORT 2021

presented to the Charity Commission of England & Wales and the Office of the Scottish Charities Regulator

Toxicity of formulated treatments for head lice in UK and internationally

The basic standard set in the Open Access review, the 2020 International recommendations for an effective control of head louse infestations, is that “Only evidence based effective products that are not harmful to children or the environment should come to market”⁶. This challenges the prevailing lax regulatory framework for head lice devices and medicinal products:

- Currently, there is no obligatory monitoring in any country of the resistance that a population of head lice naturally develops to oft-applied insecticides, which renders formulations less and less effective. This changes the balance of risk versus benefit, so the risk of using them can outweigh the benefit, especially in neuro-toxic insecticides like **malathion** and **permethrin**. The standard set in the International recommendations is that products falling below 85% efficacy should be disallowed⁶. It is troubling that the 2005 evidence of very low cure rates for products containing malathion or permethrin in the UK was not acted on by the regulatory authorities². These products have been on the UK market since the 1970s and 1990s respectively.

- Since the mid-2000s it has been assumed that many substances permitted in the personal care industry are safe to use against head lice, for example, **cyclopentasiloxane** or **cyclomethicone (D5)**, a silicone based cyclic compound, which is found at 50 – 96% concentration in widely-used treatments for head lice. Below, we trace the history of this one example –

LATE IN THE DAY, not until 2015, was it recognised that “aggregate exposure to Cyclopentasiloxane (D5) via cosmetic products is not safe” and may be toxic to human reproduction⁷.

TOO LATE was D5 listed by the European Chemicals Agency (ECHA) as a substance of very high concern (SVHC) in 2018⁸ due to its persistent, bioaccumulative and toxic attributes, including endocrine (hormone) disruption⁹ and liver damage.

FINALLY from 31 January 2020 a Registration, Evaluation, Authorisation and Restriction (REACH) regulation¹⁰ restricted the placing “on the market in wash-off cosmetic products in a concentration equal to or greater than 0.1% by weight” of either D4 or D5, BUT products already in retail remained on sale.

MOREOVER, in a further ECHA document on D4, D5 and D6¹¹, adopted by REACH in June 2020, treatments for head lice come under later restrictions for leave-on cosmetics. A major concern is that D4, 5 and 6 pollution has a “potential to accumulate in the environment and cause effects that are unpredictable in the longterm and are difficult to reverse even when releases cease”. Total releases to the [EU, including UK] environment are estimated at 18,000 tonnes pa plus steady-stock releases of 500 tonnes (Summary p 1)¹¹.

During the application of treatment of head lice cyclomethicone (D5) can be inhaled as it evaporates off carrying endocrine disrupting chemicals into the lungs of children and their carers during 2 doses with application times ranging from 5 minutes to 8 hours/overnight.

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In 2015, Apoteket AB, the Swedish government-owned pharmacy chain rang the ALARM BELL, saying they could not wait for legislation to safeguard health, they acted directly by clearing all products containing cyclic silicones from their shelves and encouraged shoppers to return any suspect product they had bought in the past by offering a 25% reduction on purchases of replacement products¹².

We can only hope that manufacturers using ingredients that release D4, 5 and 6 also took a responsible attitude to phasing them out well in advance of the introduction of restrictive measures.

In Costs and benefits of REACH restrictions, ECHA calculates the net gain: “Restricting the manufacture and use of chemicals that pose a risk in the EU results in health benefits worth around 2.1 billion euros each year over the next decades...The health benefits include, for example, reduced risk of cancers, sexual development disorders, occupational asthma and allergic skin or respiratory diseases. As the associated costs to society add up to 0.5 billion euros per year, the health benefits are four times greater than the costs ” ¹³.

International recognition of gold standard wet combing as a safe alternative to formulated treatments

As was discussed at the 2018 International Conference on Phthiraptera (Lice), “Many inefficacious products are sold. ... High expenditure on topical products cannot be justified, as these burden the underprivileged, often stigmatized as the continuous source of infestation” ⁴. Consensus opinion at this conference was expressed in a landmark publication, the 2020 International recommendations for an effective control of head louse infestations ⁶. In this Open Access review, leading specialists specify the Bug Buster Kit as an alternative to formulated treatments: “Systematic use of a louse comb over the 10-day period during which the louse embryo in the egg completes its development can remedy an infestation. Wet combing, or bug busting, ... entails combing on days 0, 4, 8, and 12; using specific hair washing instructions with shampoo and conditioner; specific combs; and specific combing procedures ”⁶ This is referenced to Hill et al. 2005 who reported on a UK randomised clinical trial of the Bug Buster Kit versus insecticide treatments sold over-the-counter in pharmacies². In this trial unsupervised families relied entirely on the product Instructions for Use without additional training, reflecting the real life situation². Follow-up showed that most families randomised to the Kit continued to re-use it for detection and cure of any new infestations acquired in the year under study³.

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In their 2021 annual report Community Hygiene Concern (CHC) resolved to:

- Play our part in handing on a liveable world to the next generation.

We concur with the URGENT sentiments expressed in the British Medical Journal in relation to COP26: In a world on the edge of climate disaster “collectively and individually we must lead by example: driving system change in healthcare to reduce emissions and waste, advocating for national and international political action, and educating our patients and the public to help safeguard the future of our planet and its people. We can’t wait for someone else to act. We don’t have time for that” ¹⁴. The very children whose future is at stake do not want unsafe, polluting treatments for head lice, especially as most do not work

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adequately^{6,15,16}. The low cost, high value alternative, the Bug Buster wet combing Kit with genuinely green credentials is recognised in UK NHS advice^{17,18}. CHC calls for more practical partnership support to facilitate uptake of this sustainable solution.

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18. NICE Clinical Knowledge Summary – Head Lice: <https://cks.nice.org.uk/head-lice/>

Please see ANNEX below for Abbreviations and appended ERASE TOXINE – HEAL (2021) poster/checklist on chemicals to avoid when shopping for cosmetics and toiletries: 2021/UnderTheLabel_2pager-infographic.pdf

ANNEX – Abbreviations

CKS Clinical Knowledge Summary

COP26 Conference of the Parties, UN Climate Change Conference, Glasgow, 31 Oct-12 Nov 2021

D4, D5, D6 silicone based cyclic compounds: D4 cytotetrasiloxane, D5 cyclopentasiloxane or cyclomethicone, D6 cyclohexasiloxane

ECHA European Chemicals Agency

EDC endocrine (hormone) disrupting chemical e.g. Bisphenol A (BPA), phthalates

EUDAMED EU database to provide a living picture of the lifecycle of medical devices

MD medical device: low risk Class 1 medical devices may be available off the shelf (on general sale)

Medicine (medicinal product): substance or combination of substances claimed to have properties of preventing or treating human disease

MHRA Medicines and Healthcare products Regulatory Agency UK

NGO Non-Government Organisation

NICE The National Institute for Health and Care Excellence

OTC over-the-counter in pharmacies, stored behind the counter

PBT/vPvB substances that are Persistent, Bioaccumulative and Toxic / very Persistent very Bioaccumulative posing big threats to human health and the environment

PDMS polydimethylsiloxane – silicone polymers – produced from D4; they contain residual amounts of D4 and D5. Dimeticone is a common PDMS ingredient in cosmetics, toiletries and widely used treatments for head lice

POM and P products: medicinal products marked POM are solely dispensed to meet a prescription written by an appropriately qualified health practitioner; P marked products may be dispensed OTC in pharmacies without a prescription

RAC Committee for Risk Assessment

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REACH Registration, Evaluation, Authorisation and Restriction of Chemicals in the EU; up to 31 Dec 2020 this included UK, thereafter UK established its own REACH

SCCS Scientific Committee on Consumer Safety

SEAC Committee for Socio-economic Analysis

SVHC substance of very high concern

ATTACHMENT

NGO ERASE TOXINE – HEAL (2021) [Under the Label: The story behind chemicals in cosmetics](#)

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