SHORT COMMUNICATION

Dioxins in children

In the recent paper "The effects of pesticide use on the paediatric population: a Canadian perspective"[1], our paper, "Pesticide assessment: Protecting public health on the home turf"[2] was incorrectly ascribed within the text to the Pest Management Regulatory Agency (PMRA, the Canadian federal regulatory body). In our paper, we criticised the assessment of the herbicide 2,4-D for turf by the PMRA. We called for improved pesticide assessment that gave greater weight to broader evidence including epidemiological studies, as well as precautionary advice on the part of physicians.

Debate on some aspects remains unresolved, and unfortunately there have been no recent data on an issue that we consider to be very important. It may even help to explain the continuing strong associations epidemiologically and mechanistically between exposure to 2,4-D and adverse outcomes including reproductive and neurological dysfunction, and cancers such as non-Hodgkin lymphoma.

Dioxins that bind with the aryl hydrocarbon receptor are monitored and regulated in Canada. These are the minority (17/74) of dioxins; they all have at least 4 chlorine atoms. 2,4-D is contaminated with an unmonitored form of dioxin, 2,7-dichlorodibenzo-p-dioxin (2,7-DCDD). In a meeting with the PMRA (August 2006) we were concerned to learn that 2,7-DCDD is present at levels much higher than the regulated dioxins, such that 2,7-DCDD could not be measured in the same analytical "runs" the PMRA does to check for higher-chlorinated dioxins.

There is very little research on this form of dioxin, but in 1986 2,7-DCDD was found to be "equipotent" to the very toxic 2,3,7,8-TCDD in a test of immunosuppression[3]. Given the wide use of herbicides that are contaminated with 2,7-DCDD there may be large public health implications of this contamination of our food and environment.

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