

Human Biomonitoring, Intake Values and Food Monitoring for Dioxins and Furans in Canada

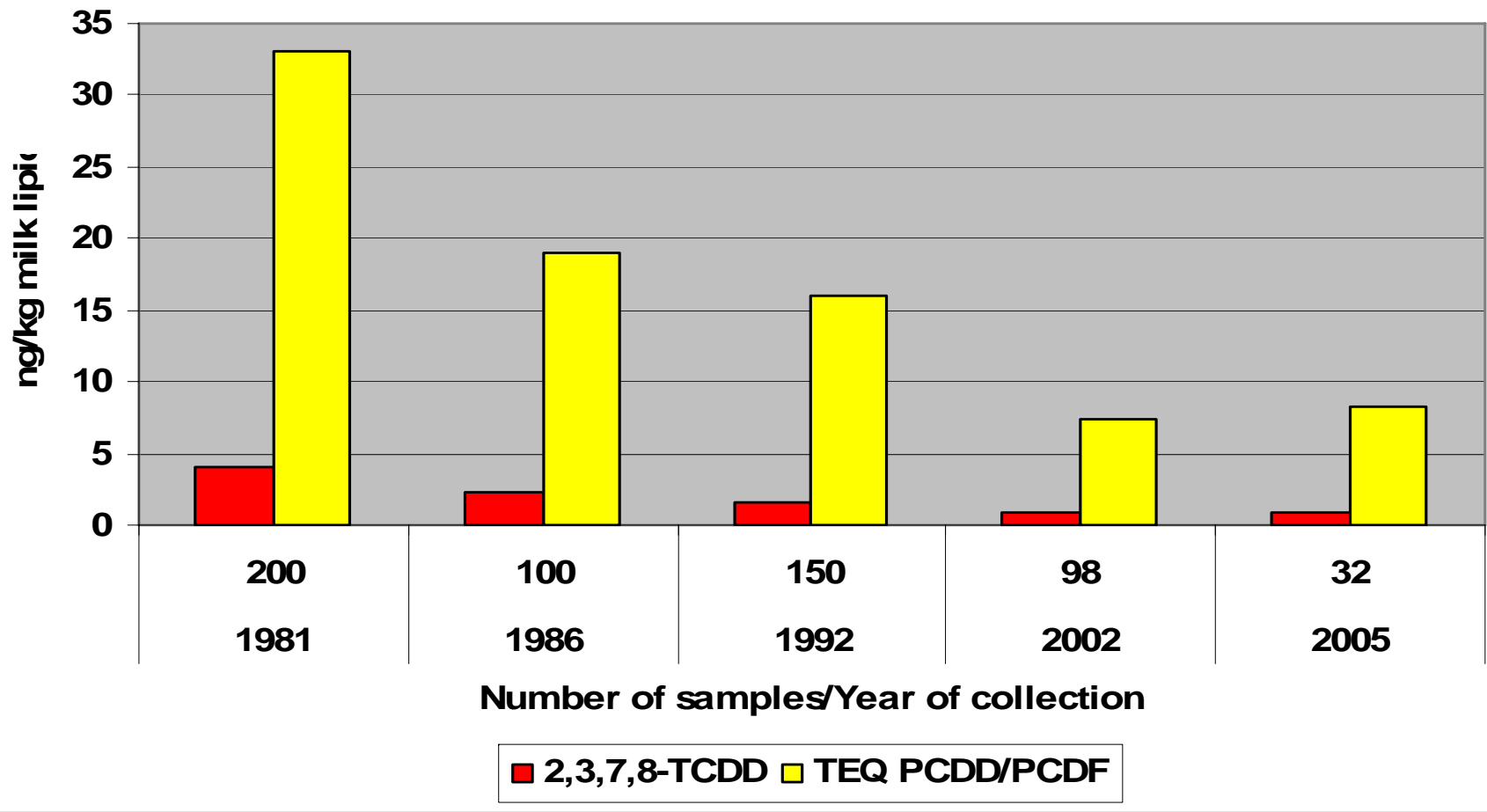
Some Canadian Human Biomonitoring Programs

- Health Canada study of organochlorines in human milk- 1967+
- Health Canada development of Canada-wide project to assess pre and post natal biomonitoring of pregnant women for dioxins and other environmental chemicals; multi-partner funded; 3-5 year study to commence in 2007.
- Health Canada compilation of human exposure data including metals and POPs, from the U.S., Canada and Mexico; projected completion by late 2007.

Trends of TCDD and TEQ in Canadian Human Milk values in ng/kg milk lipid (ppt)

Year of collection	Number of samples	2,3,7,8-TCDD	TEQ D/F only
1981	200 c	4.0	33
1986	100 c	2.2	19
1992	150 i	1.5	16
2002	98 i	0.8	7.4
2005	32 i	0.9	8.2

Trends of TCDD and TEQ in Canadian human milk



Trends of Dioxins in Canadian Human Tissues

Type	Year	2,3,7,8- TCDD	TEQ D/F
Adipose N=46	1976	7.0	36
Plasma N=20	1988	3.2	26
Plasma N=64	1994	1.8	20

Current Canadian Intake Values

- estimates of current intake for the general Canadian population do not exceed 1 pg/kg bw/d, well below the Canadian interim guideline level of 2.3 pg/kg bw/d.
- about 0.62 pg/kg bw/d of this is from food.

Food Inspection

- dioxin monitoring program for livestock feed conducted by the Canadian Food Inspection Agency.
- yearly sampling of fish meal, fish oil, animal fats and mineral sources.
- trace-backs undertaken when food samples show elevated dioxin levels potentially originating from livestock feed.

1998/99 Feed Contaminant Results

- 24 fish meals, fish feeds and 9 fish oils sampled, some originating from outside Canada.
- mean dioxin/furan level in Canadian origin fish meal and fish feed samples, 1 ppt TEQ based on whole weight content.
- mean dioxin/furan level in Canadian origin fish oil, 9.9 ppt TEQ, based on fat/lipid content.
- both levels are below the Canadian contaminant limit for dioxins in fish and fish products, 20 ppt TEQ.

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