

# Appendix 1 - Statement on the effects of lead on maternal health

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## Lead exposure from food in women of childbearing age

Table 1. Estimated exposure (in µg/kg bw/day) to lead from foods consumed by women of childbearing age (16-49 years) using data from the total diet study food groups (Bates *et al.*, 2014, 2016; Roberts *et al.*, 2018).

Food Groups	Mean Exposure to lead LB to UB (µg/kg bw/day)*	97.5th Percentile Exposure to lead LB to UB (µg/kg bw/day) *
Bread	0.0061	0.015

Miscellaneous Cereals	0.0080	0.023
Carcase meat	0-0.0014	0-0.0065
Offal	0.00057	0.011
Meat products	0.0022	0.010
Poultry	0.0015	0.0055
Fish and seafood	0.0015	0.0071
Fats and oils	0-0.00034	0-0.0010
Eggs	0-0.00052	0-0.0025
Sugars and confectionaries	0.0020	0.0081
Green vegetables	0.0088	0.034
Potatoes	0-0.0045	0-0.013
Other vegetables	0.0063	0.019
Canned vegetables	0.0027	0.013
Fresh fruit	0-0.0047	0- 0.018
Fruit products	0.0041	0.024

Non-alcoholic beverages	0-0.039	0-0.091
Milk	0-0.0037	0-0.014
Dairy products	0.0023	0.0087
Nuts and seeds	0-0.00013	0-0.0011
Alcoholic drinks	0.0053	0.037
Meat substitutes	0.00020	0.0027
Snacks	0.00055	0.0025
Desserts	0.00062	0.0039
Condiments	0.0045	0.016
Tap water	0-0.0048	0-0.021
Bottled water	0-0.0013	0-0.0093
Total	0.057-0.12	0.12-0.23

\*Values have been rounded to two significant figures. LB=lower bound; UB=upper bound. "Total" is sum of the values for individual items.

## **Lead exposures from water in women of childbearing age**

Table 2. Concentration of lead in tap water sampled in the nations of the United Kingdom in 2019 (µg/l).

<b>Region</b>	<b>N</b>	<b>LB mean</b>	<b>LB SD</b>	<b>UB mean</b>	<b>UB SD</b>
England and Wales*	10967	0.38	0.38	2.15	1.9
Scotland	436	0.34	1.2	0.48	1.2
Northern Ireland	122	0.24	0.79	1.1	0.75

\*99<sup>th</sup> percentile concentration.

LB = lower bound: values below the limit of detection assumed to be zero.

UB = upper bound: values below the limit of detection assumed to be the same as the limit of detection.

## References

Bates, B.; Lennox, A.; Prentice, A.; Bates, C.; Page, P.; Nicholson, S.; Swan, G. (2014) National Diet and Nutrition Survey Results from Years 1, 2, 3 and 4 (combined) of the Rolling Programme (2008/2009 – 2011/2012) Available at: [Main heading \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/270412/nutrition_survey_years_1_2_3_and_4_combined.pdf)

Bates, B.; Cox, L.; Nicholson, S.; Page, P.; Prentice, A.; Steer, T.; Swan, G. (2016) National Diet and Nutrition Survey Results from Years 5 and 6 (combined) of the Rolling Programme (2012/2013 – 2013/2014): [Main heading \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/270412/nutrition_survey_years_5_and_6_combined.pdf).

Roberts, C.; Steer, T.; Maplethorpe, N.; Cox, L.; Meadows, S.; Page, P.; Nicholson, S.; Swan, G. (2018) National Diet and Nutrition Survey Results from Years 7 and 8 (combined) of the Rolling Programme (2014/2015 – 2015/2016): [National Diet and Nutrition Survey \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/270412/nutrition_survey_years_7_and_8_combined.pdf).