

Background Exposure from the diet

In this guide

[In this guide](#)

1. [Annex B: Assessment of Exposure](#)
2. [Consideration of ginger from other sources](#)
3. [Background Exposure from the diet](#)
4. [Further Information](#)

Exposure estimates based on the NDNS

4. Table 5 provides exposure estimates for women of childbearing age (16 - 49 years) from years 1 - 8 of the NDNS survey (Bates *et al.*, 2014; 2016; Roberts *et al.*, 2018). The NDNS (Bates *et al.*, 2014; 2016; Roberts *et al.*, 2018) does not provide data for pregnant or lactating women so while the estimates are based on women of childbearing age, the data may not necessarily be representative of the maternal diet. The food groups used for the exposure assessment comprised all foods within the NDNS database which contained ginger (raw, powdered etc) except for alcoholic beverages. Mean estimated acute ginger exposure from the diet of women aged 16-49 years old was 0.026 g/kg bw/day, with a 97.5th percentile exposure of 0.16 g/kg bw/day. The corresponding mean and 97.5th percentile chronic ginger exposure estimates were 0.0083 g/kg bw/day and 0.058 g/kg bw/day.

5. Table 5 indicates the contribution of ginger to the diet of women aged 16-49 years is low, therefore, the main contributor to exposure for some could be from supplement use. This may vary however according to country of origin. For example, ginger is used more and in larger quantities in foods in Asian, African and Caribbean communities.

6. The NDNS does not provide data for pregnant women, therefore there would be uncertainty as to whether this gives an accurate reflection of exposure during pregnancy, especially in women who use ginger drinks and teas or foods

such as ginger biscuits to alleviate symptoms of pregnancy-associated sickness.

7. TOX/2021/26 concluded that the potential risks arising from exposure to ginger from food can be considered low compared to exposure from supplements and shots, which are available at much higher doses due to their concentrated nature.

8. The Committee highlighted that assumptions would have to be made on how many products, such as ginger shots, were consumed per day. The Committee noted that, as it is commonly understood that ginger suppresses morning sickness, it could not be ruled out that pregnant women would be using the supplements in this way. Diet plus supplement exposure would need to be considered, as well as diet plus shots depending on the exposure period of concern.

Consumption of ginger from food sources

9. The FSA Exposure team have sourced information on ginger intake in women of childbearing age from food. Due to the limited information on consumption amounts of supplements and drinks in pregnant women, exposure was estimated based on the compositional and usage information on widely available supplements and concentrated drinks. Full details of the ginger sources are given in Table 1 - 4.

Table 5: Estimated ginger exposures from a variety of sources in women aged 16 – 49 years old.

Source	Range of daily exposures (g/day)	Range of daily exposures (g/kg bw/day)	Mean acute exposure* (g/day)	Mean acute exposure* (g/kg bw/day)	97.5 th percentile acute exposure* (g/day)	97.5 th percentile acute exposure* (g/kg bw/day)	Mean chronic exposure* (g/day)
Food ^a	NA	NA	1.7	0.026	11	0.16	0.55

Drinks (Including tea and shots) ^{b1,b}	0.5 - 32.5	0.0071 - 0.46	NA	NA	NA	NA	NA
Supplements ^c	0.010 - 24	0.00014 - 0.34	NA	NA	NA	NA	NA

¹This assumes only one serving is consumed per day.

^a Data obtained from the National Diet and Nutrition surveys years 1-8 calculated from women of a childbearing age (16-49 years) (Bates *et al.*, 2014; 2016; Roberts *et al.*, 2018).

^b Data obtained online from retailers, see Appendix 1 for further details.

^c Data obtained online from retailers, see Appendix 1 for further details.

*Rounded to 2 significant figures.

10. The upper value of the range of exposure from drinks and supplements was over double that estimated from 97.5th percentile acute exposure from food and 8-10 times that for chronic consumption from food (Table 5).

11. As the NDNS does not provide data for pregnant women, there would be uncertainty as to whether the data in Table 1 are an accurate reflection of consumption during pregnancy. This uncertainty also extends to data presented for drinks and supplements, as the pattern of consumption during pregnancy to alleviate symptoms of sickness is unknown.