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Title: Dietary Fibre intake in teenagers (13-18 years) living in Ireland

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Background: Dietary fibre (DF) plays a major role in normal bowel function and low intakes have been reported globally for all population groups including teenagers. The aim of this study was to use new data from the National Teens' Food Survey II (2019-20) to estimate intake and sources of DF for teenagers in Ireland.

Methods: Dietary intake data were collected using a 4d weighed food-diary and DF intake was estimated using UK and Irish food composition data. The mean daily intake (MDI) of DF was calculated via the NCI-method and compared with the adequate intake (AI) of 19g/d (13-14-year-olds), 21g/d (15-17-year-olds) and 25g/d (18-year-olds) proposed by EFSA for normal bowel function³. The percent contribution of food-groups to DF intake was calculated by the mean proportion method⁴.

Results: The MDI of DF for 13–18-year-olds was 16.9g/d with boys having a higher MDI (18.9g/d) than girls (15.0g/d) ($p < 0.001$). The MDI of DF was 16.2g/d for 13–14-year-olds, 17.3g/d for 15–17-year-olds and 17.6g/d for 18-year-olds which was below the AI for all age groups. The main sources of DF were 'breads (19%) (white bread 11%)', 'grains, rice, pasta & savouries' (14%), 'potatoes' (13%) and 'breakfast cereals' (12%).

Conclusion: DF intakes for teenagers in Ireland are low and are below the AI for all age-groups. The main sources of DF for teenagers are cereal products and potatoes with fruit and vegetables (discrete and in composite dishes) contributing also. These data may be useful in developing food-based-dietary- guidelines for teenagers in Ireland.

(250 words)

References

1. Bannon S, Walton J & Flynn A (2010) *Proc Nutr Soc* 69 (OCE5), E375
2. Stephen A, Champ M, Cloran S et al. (2017). *Nutr Research Reviews* 30(2):149-190
3. EFSA (2010). *EFSA J* 8(3):1462
4. Krebs-Smith SM, Kott PS & Guenther PM (1989) *J Am Diet Assoc* 89:671-676