

A systematic review of parental knowledge of, and compliance with, recommendations for vitamin D intake in young children in Ireland

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According to the food-based dietary guidelines released by the Food Safety Authority of Ireland (FSAI), current eating patterns do not contribute to adequate vitamin D during the winter months for young Irish children. In the first year of life, the FSAI recommends breastfed infants and those consuming <300 mL/day of formula take a 5 µg/day vitamin D supplement. From ages 1 to 5 years, they are advised to follow the same supplementation recommendation only during the extended winter months (i.e., from Halloween to St Patrick's Day). Additionally, 5% to 13% of 1–5-year-old children have vitamin D deficiency with well-recognised consequences for musculoskeletal health⁽¹⁾⁽²⁾. The objective of the present review is to summarise the literature investigating parents' knowledge of, and compliance with, recommendations for vitamin D intake from diet and supplements in young children aged 1-to-5-year-old in Ireland. A literature review was conducted in databases of PubMed, Scopus, and Web of Science up to October 2021, with six eligible articles identified. In terms of parental knowledge, there is a paucity of evidence with only one study carried out to date, reporting a low awareness (39%) of the FSAI recommendations for vitamin D intake. With regard to food sources, average daily vitamin D intakes of Irish children from food sources and supplements have been estimated between 1.76 µg and 7.6 µg, with an inadequate vitamin D intake below the estimated average requirement (EAR < 10 µg/day) in 93% to 96% of children. Despite the significant contribution of fortified foods and supplements to daily vitamin D intake (about 20% - 30%, and 10% - 20%, respectively), the proportion of inadequate vitamin D intakes are reported at 96% - 98% in fortified-food users and 74% - 75% in supplement users⁽²⁾⁽³⁾. Similarly, adherence to vitamin D supplementation recommendations among Irish 12-month-old infants has been estimated between 23% - 30% and by one year of age over 70% of parents do not fully comply with the recommendation, with 34% of parents of 1–3-year-old toddlers compliant. However, there is a lack of evidence on the parents' knowledge of, and adherence to the supplementation in Irish preschoolers aged 4-5-years. Overall, current evidence demonstrates that Irish parents have a low awareness of, and poor compliance with, the recommendations for vitamin D intake in young children. Current eating patterns do not preclude the need for supplementation in this cohort. However, evidence from this review should be interpreted in the context of limited studies in this age group, and thus, calls for further research to better understand factors which help adherence to vitamin D supplementation policy.

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