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Exploring UK consumers' intake, perceptions, and awareness of seaweed

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Popular in Asian diets and traditionally consumed by coastal communities worldwide, seaweeds are gaining broader interest in Western societies and offer a valuable plant-based source of the essential micronutrient iodine[1,2]. A 2015 market survey identified over 220 unique seaweed products available for purchase on the British retail market, ranging from seaweed-based snacks to condiments, salads, and drinks[3]. Seaweed and sushi consumption have increased in the United Kingdom over the last decade. However, according to NDNS data, neither are widely or frequently consumed, with only 7% and 10% of respondents reporting seaweed and sushi consumption, respectively[4]. Further exploring seaweed consumption and sentiment in UK consumers can provide valuable insights relevant to the seaweed food industry for new product development and more extensive marketing. A cross-sectional online survey was developed to investigate seaweed consumption frequency, perceptions of seaweed as a food, drivers and barriers of seaweed consumption, food neophobia[5], and awareness of the benefits and risks of eating seaweed. Adult participants in the UK (n = 970) were recruited via social media between May 2020 and January 2021. Quantitative data were analysed using SPSS, whilst free-text responses were analysed thematically and with sentiment analysis techniques (AFINN and nrc lexicons, in R). Participants were 54% female (n = 519), 76% white British (n = 736), and mostly between the ages of 18 and 39 (n = 631, 65%). Seaweed consumption was common, with 66% of participants (n = 642) reporting consumption of at least one serving in the previous year. However, the median frequency of seaweed consumption was low at 0.8 servings/month (IQR 0.2–2). For participants reporting no consumption, a lack of opportunity was cited as the most common reason (45%, n = 149). There was a weak negative correlation between food neophobia scores and monthly seaweed intake (r_s=−0.226, p = 0.025). Participants' perceptions of seaweed as a food were neutral (average AFINN score 0.2 ± 0.7). Sensory aspects of seaweed (e.g., taste, smell, texture), knowledge of health benefits and risks, affordability, and availability were common factors influencing whether participants would increase their seaweed consumption. Awareness of the nutrition and health effects of seaweed consumption was low, with around half of participants reporting no awareness of the potential benefits (n = 444, 46%) or risks (n = 627, 65%). Whilst 49% (n = 475) of consumers recognised seaweed as a source of iodine, only 23% (n = 223) correctly identified the potential risk of iodine excess. Whilst self-reported intake frequency of seaweed was low, our results indicate that seaweed is consumed in the UK. Seaweed food product producers should focus on developing reasonably priced, convenient products that appeal to consumers' sensory preferences, alongside improved marketing to increase consumers' awareness of seaweed as a sustainable, plant-based source of iodine.

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