

Mere exposure and flavour–flavour learning increase 2–3 year-old children’s acceptance of a novel vegetable

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ABSTRACT

Vegetable consumption is low among many children. This study compared the efficacy of the exposure learning strategies mere exposure, flavour–flavour and flavour–nutrient learning in changing children’s intake of a novel vegetable. An unmodified artichoke purée was served at pre-testing. Hereafter children were exposed 10 times to unmodified purée (mere exposure, n = 32), a sweetened purée (flavour–flavor learning, n = 33) or an energy dense purée with added fat (flavour–nutrient learning, n = 39). Unmodified and sweet purée contained approximately 200 kJ/100 g; the energy dense purée 580 kJ/100 g. The unmodified purée was served again at post-testing, 3 and 6 months after last exposure to monitor long-term effects of learning. Intake of purée increased in the mere exposure and flavour–flavour condition, and was unchanged in the flavour–nutrient condition. Mere exposure changed children’s intake by the 5th exposure, flavour–flavour learning by the 10th. Mere exposure led to the largest increase in intake of unmodified purée at post-test and over 6 months. Children following flavour–flavour learning consumed more of the sweet purée than of unmodified purée. About 30–40% of the children were resistant to acceptance changes. The results of this study imply that mere exposure and flavour–flavour learning are powerful strategies for changing children’s acceptance of a novel vegetable, even though a substantial number of children are resistant to these types of exposure learning.

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