

Repeated exposure of infants at complementary feeding to a vegetable puree increases acceptance as effectively as flavor-flavor learning and more effectively than flavor-nutrient learning

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ABSTRACT

Children's vegetable consumption is below the public health recommendations. This study aimed to compare learning mechanisms to increase vegetable acceptance in infants at complementary feeding, namely repeated exposure (RE), flavor-flavor learning (FFL), and flavor-nutrient learning (FNL); measure the stability of the learning effect; and examine the impact of infants' feeding history on vegetable acceptance. The study was composed of a pre-exposure test, an exposure period, a post-exposure test, and tests at 2-wk, 3-mo, and 6-mo follow-ups. At pre- and post-exposure, a basic artichoke purée and carrot purée were presented to 95 French infants (6.4 6 0.8 mo). During the exposure period, infants were randomly split into 3 groups and were exposed 10 times to the basic (RE group; 2 kJ/g; n = 32), a sweet (FFL group; 2 kJ/g; n = 32), or an energy-dense (FNL group; 6 kJ/g; n = 31) artichoke purée 2 or 3 times/wk. To evaluate acceptance, intake (g) and liking were recorded at home by parents. Between pre- and post-exposure, intake of the basic artichoke purée significantly increased in the RE (+63%) and FFL (+39%) groups but not in the FNL group; liking increased only in the RE group (+21%). After exposure, artichoke was as much consumed and as much liked as carrot only in the RE group. Learning of artichoke acceptance was stable up to 3 mo post-exposure. Initial artichoke intake was significantly related to the number of vegetables offered before the study started. RE is as effective as and simpler to implement than FFL and more effective than FNL for increasing vegetable acceptance at complementary feeding.

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