

Dietary advice to reduce prevalence of early childhood caries

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Early childhood caries (ECC), defined as the presence of caries on at least one primary tooth in children <6 years of age⁽¹⁾, is the most common chronic infectious disease of children worldwide⁽²⁾. ECC has been reported to be exacerbated by dietary factors such as sucrose intake in the form of sucrose-containing baby bottle contents and in solid food⁽³⁾. Another recognized dietary factor is prolonged bottle-feeding or breast-feeding⁽⁴⁾.

The diets of 191 low-income Mexican-American children aged <4 years enrolled in a Women, Infants, and Children (WIC) programme in San Antonio, TX, USA were assessed for appropriateness according to guidelines established by the American Academy of Pediatric Dentistry and the American Academy of Pediatrics^(5,6). Data were collected via maternal report from a cluster random sample of the target population. The following factors were used to judge dietary appropriateness:

Appropriate	No bottle-feeding or breast-feeding after age 12 months, no baby formula after age 12 months, confectionery consumption monthly or less frequently, daily fluoride exposure
Marginally appropriate	Consumption of confectionery, sugary beverages and fluoride exposure less frequently than daily but more frequently than monthly
Inappropriate	Any use of bottle- or breast-feeding after age <12 months, confectionery consumption daily, any confectionery consumption for infants aged <12 months, sippy cup (training cup with a lid and a spout) use at age >24 months, no or less frequently than monthly fluoride exposure, consumption of acidic beverages excluding juice daily or no daily milk consumption

By the described dietary-assessment method 51% of children's maternally-reported diets were considered inappropriate, while 35% were deemed marginally appropriate and only 14% were considered appropriate. This difference was found to be significant, whether compared in categories of appropriate, marginally appropriate and inappropriate ($P < 0.01$) or when diets judged to be appropriate or marginally appropriate were compared with diets judged to be inappropriate ($P = 0.02$). A greater proportion of the diets of the children without ECC was judged to be appropriate as compared with the children with ECC. Comparisons were made by chi-square test (SAS statistical software release 8.2; SAS Institute, Cary, NC, USA).

Public health measures to encourage adherence to established paediatric dietary guidelines should be supported.

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